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THE  
VOYAGE OF H.M.S. CHALLENGER.

NARRATIVE—VOL. II.



REPORT  
ON THE  
SCIENTIFIC RESULTS  
OF THE  
VOYAGE OF H.M.S. CHALLENGER

DURING THE YEARS 1873-76

UNDER THE COMMAND OF  
CAPTAIN GEORGE S. NARES, R.N., F.R.S.  
AND  
CAPTAIN FRANK TOURLE THOMSON, R.N.



PREPARED UNDER THE SUPERINTENDENCE OF  
THE LATE  
Sir C. WYVILLE THOMSON, Knt., F.R.S., &c.

REGIUS PROFESSOR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH  
DIRECTOR OF THE CIVILIAN SCIENTIFIC STAFF ON BOARD

AND NOW OF  
JOHN MURRAY, F.R.S.E.

ONE OF THE NATURALISTS OF THE EXPEDITION

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## *Appendix A.—THE PRESSURE ERRORS OF THE CHALLENGER THERMOMETERS.*

By Professor P. G. TAIT, M.A., Sec. R.S.E., Professor of Natural Philosophy in the University of Edinburgh.

*Received 1st July 1881.*

## *Appendix B.—ON THE PETROLOGY OF ST. PAUL'S ROCKS (Atlantic).*

By Professor A. RENARD, F.G.S.

*Received 30th October 1879.*

# ERRATA IN MAGNETICAL RESULTS, VOL. II. OF THE VOYAGE OF H.M.S. CHALLENGER.

Page 15, line 21, *for*  $\theta$  and  $\zeta$ , *read*  $\theta'$  and  $\zeta$ .

„ 16, *for* formula  $\phi = \phi$ , &c., *read*  $\phi' = \phi$ .

„ 16, In succeeding formula, *for* co.  $\nu'$ , *read* cosec  $\nu'$ .

„ 29, Tristan d'Acunha, *for* Lat.  $37^{\circ} 27'$ , *read*  $37^{\circ} 2.7'$ .

„ 29, Table Bay swinging, *for* Inclination  $56^{\circ} 54'$ , *read*  $55^{\circ} 54'$ .

„ 33, *for* Cape York, *read* Port Albany, and *vice versa*.

„ 38, *for* Kivaneah Volcano, *read* Kilauea Volcano.

„ 42, *for* Falkand Islands, *read* Falkland Islands.

„ 47, Tristan d'Acunha, *for* Lat.  $37^{\circ} 27' N.$ , *read*  $37^{\circ} 2' 42'' S.$

„ 50, Kobé, Japan, *for* Lat.  $31^{\circ} 41' 3''$ , *read*  $34^{\circ} 41' 3''$ .

„ 54, the numeral V. should be omitted from the heading.

„ 67, *for* Horizontal Force adopted  $\cdot 239$ , *read*  $8 \cdot 239$ .

„ 68, Sandy Point, Declination adopted, *for*  $21^{\circ} 1.85'$ , *read*  $21^{\circ} 18.5'$ .

„ 69, Tahiti Inclination adopted, *for*  $33^{\circ} 3.3'$ , *read*  $30^{\circ} 3.3'$ .

„ 140, December 11, *for* Inclination  $56^{\circ} 54'$ , *read*  $55^{\circ} 54'$ .

## EDITORIAL NOTES.

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THE Magnetical and Meteorological results which form the greater part of this volume are accompanied by Memoranda by Sir Frederick Evans, R.N., K.C.B., F.R.S., and Staff-Commander Tizard, R.N., which fully explain the origin and scope of these valuable contributions to science.

The Challenger having traversed much of the navigable surface of the globe during her voyage, it may be fairly assumed that these Magnetical and Meteorological observations, from their extent and fulness, the excellence of the instruments employed, and the careful manner with which they were made, are of exceptional interest and value.

The Meteorological Observations were taken by the Naval Scientific Staff on board, under the direction of Staff-Commander Tizard, and reduced and tabulated by him; the extensive series of observations of the magnetic inclination and intensity, made both on land and at sea by Commander Maclear, R.N., and Lieutenant Bromley, R.N., were reduced by those officers, and prepared for publication by Staff-Commander Creak, R.N., under the superintendence of Captain Evans, R.N., C.B., F.R.S., Hydrographer of the Admiralty.

Appendix A. consists of a paper on the Pressure Errors of the Challenger Thermometers, by Professor P. G. Tait.

This is a most valuable contribution not only on account of its immediate bearing on our deep-sea temperature observations, but also on account of the many interesting facts, made known for the first time, with respect to the behaviour of several substances under great pressure.

Appendix B. consists of a paper by Professor Renard on the Petrology of St. Paul's Rocks (Atlantic).

A peculiar interest has been attached to these rocks since Mr. Darwin expressed a belief that they were not volcanic.

Shortly after the return of the Challenger, I formed the opinion that they were of eruptive origin, chiefly because I believed fluxion structure could be observed in many of the microscopic sections of the rocks.

As it was of great importance to have the opinion of an experienced Petrologist, all the materials and observations were placed in the hands of Professor A. Renard, who has discussed the whole question with great ability. In the narrative volume several photographs of the rocks will be given.

It was originally intended to issue this volume at the same time as Volume I., containing the narrative proper of the voyage. Since, however, Vol I. cannot, for various reasons, now appear within the present year, I have considered it better to issue the two volumes of the narrative separately.

JOHN MURRAY.

THE  
VOYAGE OF H.M.S. CHALLENGER.

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I.—MEMORANDUM on the MAGNETICAL OBSERVATIONS made during the Voyage of H.M.S. Challenger, 1872-76, prepared in the HYDROGRAPHICAL DEPARTMENT of the ADMIRALTY, under the Superintendence of the HYDROGRAPHER.

When at the request of the Royal Society the Government decided upon sending H.M.S. Challenger upon her recent voyage of scientific research, the subject of Terrestrial Magnetism was amongst others brought forward as one of importance, both in the interests of science and safe navigation. Preparations were accordingly made for as complete a magnetic survey of the ports visited and seas traversed, as time and circumstances would permit.

The necessary equipment of magnetical instruments, and the preparation of instructions for the officers to be engaged on the service were placed in the hands of Captain F. J. Evans, R.N., F.R.S., then in charge of the Admiralty Magnetical Department.

A list of the instruments furnished originally to the "Challenger" is given in the "Magnetical Instructions," a copy of which is appended. A third Fox Dip and Intensity apparatus was sent to the ship at St Vincent (Cape de Verde islands). Of these instruments the Unifilar Magnetometer, the Barrow's Dip Circle, and the Fox apparatus were examined at Kew, and their several constants determined by the officials of the Observatory.

The officers selected to conduct the observations (under Captain Nares) were Commander Maclear and Sub-Lieutenant Sloggett. These officers were instructed in the use of the various instruments at the Hydrographic Department of the Admiralty and at Kew Observatory. Sub-Lieutenant Sloggett was obliged by ill health to leave the ship at Halifax in May, 1873, his place being then taken by Lieutenant Bromley.

The observations for Declination or Variation of the compass made both on land and at sea, with the various compasses furnished for that purpose, were under the charge of Staff-Commander Tizard. The compasses were previously examined at the Admiralty Compass observatory at Deptford, and rendered practically free from error.

As the fitting out of the "Challenger" at Sheerness drew towards completion, the most favourable positions for the Standard compass, and also for the gimbal table to receive the Dip and Intensity apparatus designed by Mr R. W. Fox, were selected.

The Standard compass was placed on a pedestal on the steering bridge above the quarter-deck, its card being 12 feet 9 inches above the deck, 43 feet 3 inches from the taffrail, and 97 feet from the steam funnel. This will hereafter be referred to as the Standard position.

The "Fox" gimbal table was placed on the after side of the mizenmast, supported by four metal pillars secured to the upper deck; the centre of the "Fox" circle when mounted for observation was 3 feet 9 inches above the deck, 28 feet 1 inch from the taffrail. This will hereafter be referred to as the Fox position, and the compass used there to determine the magnetical coefficients of the position as the Fox compass.

The system of observation to be pursued throughout the voyage, given in detail in the "Magnetical Instructions for H.M.S. Challenger," may here be described briefly as follows:—

(1.) At each land station the absolute Declination, Inclination, and Horizontal Intensity were to be determined, and especially at places where fixed Observatories were established. When time did not admit of the more elaborate and delicate instruments being used, Fox circles were to be employed in obtaining observations for Inclination and Total Force. With this view, and also to secure a base for the relative observations made at sea, complete sets of observations were directed to be made with one or more Fox circles at all land stations.

(2.) As magnetic elements determined at sea were known to be affected by the influence of a ship's iron, it was directed that the "Challenger" should be swung for ascertaining the errors of the Standard compass, and of the Fox circles and compass in given localities. Beginning with the port of departure, the ship was afterwards to be swung on a change of magnetic Inclination of  $30^{\circ}$  to  $40^{\circ}$ , also on any considerable alteration in the distribution of the iron in the ship's equipment, should such take place, and in regions where the Inclination was very small or very large, and finally at the termination of the voyage.

(3.) At sea, observations of the three elements were to be made daily, subject of course to vicissitudes of weather.

(4.) Copies of all observations were directed to be transmitted at an early date to the Admiralty for examination. This rule, which was faithfully observed throughout the

voyage, proved to be of great value, especially at the commencement, as then results unlooked for in a wood-built ship like the "Challenger" necessitated an "Addenda to the Magnetical Instructions" to be drawn up and forwarded to the observers. Suggestions as to fresh observations in certain directions, arising from an examination of the abstracts occasionally transmitted to the Admiralty, were frequently sent to the observers.

When the "Challenger" was ready for sea, with all the iron fittings in their places, the requisite swingings to determine the magnetical coefficients of the ship preparatory to the voyage were undertaken. As these swingings may be taken as an example of those which followed, the details are here given somewhat fully.

The ship still lay in Sheerness harbour, where she had been fitted out, and it being the first week in December, with short days, strong tides, and unsettled weather, the operation occupied four days. The first observation was to ascertain the deviation of the Standard and Fox compasses by well known methods. Then followed a series of observations for determining the mean Horizontal and Vertical Forces at the two positions on four azimuths, distributed round the compass. These forces were determined from the vibrations of a small horizontal and a vertical needle, made on four widely separated azimuths of the ship's head.

The Fox circle was next mounted at its position, and observations made for Dip, both direct and with deflectors, then for Intensity with the N. and S. deflectors taken separately, the ship's magnetic azimuth being noted by the Standard compass. It was intended to have observed on the sixteen principal points, but those on the E.N.E. and W.S.W. points were unavoidably not completed. These several observations were carried out under the superintendence of Staff-Commander E. W. Creak, of the Admiralty compass department.

On the investigation of these observations a strong Vertical Force acting upwards at the Fox position, and of an intensity unusual in a wood-built vessel was found to exist. As this was unexpected, an examination of the structural drawings of the ship was made, which proved that this force proceeded from a number of diagonal iron stringers, placed to strengthen the after section of the ship's hull, and extending from the upper deck to near the keelson. As the value of the constituent parts of this vertical force—whether proceeding from the effects of hard or soft iron—could not be ascertained in one latitude, it was necessary to await the results of the Inclination observed on board near the magnetic equator before framing additional instructions to meet the case. Revised formulæ were compiled and forwarded as an "Addenda to the Magnetical Instructions" to the "Challenger" immediately the nature of the disturbing force was ascertained.

The "Challenger," in a magnetical sense, was now ready for the prosecution of her voyage. On the 20th of December 1872, shortly after sailing from Portsmouth, observa-

tions were commenced. From this time until the final swinging for coefficients on the 2d June 1876 again at Sheerness, the three magnetic elements were observed at the following number of stations :

Land Stations,	{	Declination, . . .	74
		Inclination, . . .	71
		Horizontal Force, . . .	62
Stations of swinging ship for Coefficients,	{	Declination, . . .	25
		Inclination, . . .	27
		Total Force, . . .	26
Observations at sea,	{	Declination, . . .	545
		Inclination, . . .	616
		Total Force, . . .	590

Lisbon was the first port visited after leaving England, and here the first of the numerous and widely distributed series of observations were made with the instruments for absolute determination.

Accompanying the abstract of magnetical observations at land stations are descriptive references for identifying the observation spots. The selection of these observation spots was dependent on the following grounds:—(1.) At established magnetic observatories for instrumental comparison. (2.) At places visited by former observers, in order to determine the secular change. (3.) If at unvisited sites, then to be as free as possible from local magnetic influence, and so far as could be foreseen, in a position available to succeeding observers. It is a subject for regret that some of the stations adopted by previous observers were at the time of the visit of the “Challenger” unapproachable from the erection of buildings.

The fixed magnetic observatories visited during the voyage were Lisbon, Cape Town, and Melbourne, Australia.

At some of the localities visited local magnetic disturbances of a marked character were found to exist at spots separated sometimes only by a few feet. These places are here enumerated for the guidance of future observers. Madeira, Bermuda, St. Vincent (C. de Verde islands), Kerguelen island, Honolulu, Hilo, Valparaiso, Ascension. Of these the Bermuda Islands are especially remarkable as having been hitherto unsuspected at least for such very large local disturbances. The values of the normal Declination is  $7\frac{1}{4}^{\circ}$  W., whereas the observations give a range of from  $4^{\circ} 13'$  W. to  $9^{\circ} 57'$  W. The other elements also show similar anomalies, the Inclination ranging from  $65^{\circ} 44'$  N. to  $67^{\circ} 20'$  N.—the Horizontal Force from 4.764 to 5.073, in a limited part of this small group of Islands.

Madeira and Ascension stand next in the order of local disturbance—then St.

Vincent and Kerguelen island. Tristan d'Aunha and the Fiji islands are open to suspicion on this head, indeed, this remark may be said to apply to all islands, more especially when situated far from a continent.

Furnished as the "Challenger" was with instruments for the relative determination of the magnetic elements at sea, the difficulties and doubts arising from local disturbing influence on land were avoided in a great degree by swinging the ship (as before described); thus, as it were, transferring the place of observation to another at which the local disturbance was accurately known, namely, that caused by the iron of the ship. The relative determinations so obtained were then referred to land base stations known to be free from local disturbing causes.

The results at the numerous stations where the ship was swung during the voyage bear ample testimony to the value of the process.

When the ship returned to England and was paid off, the magnetic instruments employed during the voyage were taken to the primary base station (Kew Observatory), for a re-determination of the several constants. The satisfactory condition of the absolute instruments after the long voyage—as was then ascertained—enhances the value of the results obtained with the relative instruments, as these in the later part of the voyage, from prolonged use, became dependent upon frequent comparisons with the results obtained with the absolute instruments.

In the abstracts of the magnetical results of the voyage will be found :—(1.) A general abstract containing the values finally adopted. (2.) The several results at land stations from which the finally adopted values have been deduced. (3.) The original sea observations with their several corrections are given in detail.

The sea and land observations of Inclination and Force, with the Declination results by the unifilar, have, since the return of the "Challenger" to England, been re-examined, and the necessary reductions, as also the corrections for the ship's iron, made by Commander (now Captain) Maclear and Lieutenant Bromley. Those of the Declination made at sea, and by the several compasses on shore, were made by Staff-Commander Creak.

For the methods of reduction employed in the discussion of the sea observations, reference must again be made to the "Magnetical Instructions." The formulæ in the addenda were used for computing the corrections of the Inclination and those due to the correction of ship's head in the Intensity observations. The final correction of the latter element was obtained from a comparison of the mean Total Force on board at swinging stations with the Total Force at the adjoining land stations (when free from local disturbance)—the values at the intermediate positions at sea being derived by interpolation. This method avoids the troublesome question of temperature correction—always, it is true, small, but thus reduced to inappreciable values.

For the corrections of the Declination observations made at sea, tables were computed

from the coefficients B, C, D,—the coefficients A and E being neglected, and a value for D deduced from the several swingings made under the most favourable conditions.

The magnetic effects arising from the ship's heeling have been closely investigated. At the Standard compass position these were so small as to be safely neglected, they were, in short, masked by errors of observation.

At the Fox position, the errors arising from the heel of the ship were more appreciable; their maximum value affected the Inclination and Force with the ship's head on the east and west points of the compass, vanishing on the north and south points. [As the motion of the ship at sea was generally that of rolling or lurching, rather than that of a steady heel or incline from an upright position, an oscillation of the suspended needle instead of a determinable deflection resulted; it was unnecessary to apply any correction on this account to the results recorded in the tables.]

The term H, as chiefly employed in the "Addenda to the Magnetical Instructions" for the correction of the Inclination and Force observations at sea, has been obtained from the observations of Horizontal Force (in absolute measure) at the land stations, expressed in terms of the Horizontal Force at Kew as unit, the intermediate values of H (at sea) being interpolated with the aid of the chart of Horizontal Force given in the "Admiralty Manual" for the deviations of the compass, 4th edition, 1874.

A few remarks upon the magnetic character of the ship as affecting the determinations made at the standard and Fox positions are here offered, in order to show how fully this character has been realised for all periods of a voyage extending from the 51st parallel of north latitude to the 67th parallel of south latitude, and more than this, crossing and recrossing the magnetic equator six times; also as a measure of assurance to those who may be surprised at the magnitude of some corrections recorded in the abstract of sea observations.

The swinging of the ship for the determination of her coefficients in so many places where the Inclination and Horizontal Force had been ascertained through the medium of absolute instruments, furnished a ready means to this end.

Accompanying the tables of coefficients will be found values as computed from them of the constant parameters P, Q, R,  $c$  and  $d$  at the two instrumental positions. From these we learn that by far the greater parts of the ship's force proceeded from the effects of permanent magnetism common to hard iron, that from induction common to soft iron being comparatively small.

It is interesting to follow the changes: the magnetic character impressed upon the ship previously to her leaving England continues nearly unchanged until the magnetic equator is reached; it then gradually alters in the south magnetic hemisphere; shortly after the highest southern latitude is attained, the extreme limit of change is accomplished. This new magnetic condition remains constant until again passing the

magnetic equator northward, when the original values of the Horizontal Forces are now nearly reached, the Vertical Force recovering but slightly; after this the fluctuations of the permanent magnetism are more moderate in amount and gradual in point of time.

The extent of the magnetical observations made during this voyage, and the precision and intelligence bestowed on them by the officers to whom the duty was confided, merits high praise. Notwithstanding the constant demands on the time of these officers in connection with the general duties of the ship, untiring zeal marked their efforts to worthily contribute to magnetical science, and on these grounds warm acknowledgments are due to them.

On the return of the "Challenger" to England the duty of assisting in the final reduction of the observations and preparing the results for publication devolved upon Staff-Commander Creak of this department: he has performed the service with an earnest desire to render the work worthy of the expedition.

F. J. EVANS.

## II.—MAGNETICAL INSTRUCTIONS for the Voyage of H.M.S. Challenger, Captain G. S. Nares, 1872.

As in the forthcoming voyage of H.M.S. Challenger a large extent of the surface of the globe will be passed over, it is desirable in the interests of nautical, as well as of natural science, that "Terrestrial Magnetism," among other subjects of inquiry, should engage attention; and when the ship is at sea be considered a matter of daily observation. For this purpose, instruction has been afforded at Kew Observatory, and in this Department, to certain of the officers in the use of instruments necessary for the determination of the magnetic elements both on land and at sea, and a supply of these instruments furnished.

The instruments comprise—

- (1.) A portable Unifilar Magnetometer for determining the absolute horizontal intensity and the declination *on land*;
- (2.) A Barrow's circle with two reversible needles for determining the inclination *on land*;
- (3.) A Kater's azimuth compass, with levelling table, for determining the declination *on land*,—to be considered as an auxiliary to the declination apparatus of the unifilar magnetometer;
- (4.) Fox's apparatus or circle (in duplicate) for observing the magnetic inclination and force *at sea* primarily;
- (5.) A gimballed table complete, adapted for Fox's circle as to be used *at sea*;
- (6.) A compass bowl and standard card, adapted to occupy the place of the Fox circle, when necessary to obtain certain of the ship's magnetic coefficients at the assigned position of the Fox circle, as also the compass deviation there;
- (7.) A small vibrating needle to be employed for determining independently the ship's mean Horizontal Force to the north, necessary for the reduction of the Inclination and Intensity observations made *at sea* with the Fox circle.

The article on Terrestrial Magnetism given in the "Admiralty Manual of Scientific Enquiry," by Sir Edward Sabine, late President of the Royal Society, affords most valuable information on the subject, not only in the aim of the several observations which are required and the ultimate object in view, but also in the use of the several instruments. The careful consideration and study of this article cannot be too strongly urged on those entrusted with the duties defined in its several sections; indeed, it must be held as forming the basis of instructions to all officers conducting magnetic surveys *at sea*, especially those paragraphs (7, 11, 12) concerning the relative measurements of the Magnetic Force, the summary of the observations to be made, and the record and transmission of the observations.

In the Appendixes, No. 1,—No. 2 so far as it relates to Inclination observations, and in No. 3 (omitting paragraphs 5 and 6 of Section II.), will be found clear directions for using the instruments furnished to the "Challenger."

Considering, however, the delicate nature of magnetical observations, and the exactitude required by modern science in their results, the experience of those who have been engaged in the performance

of these duties over an extended area is not without value; the following Memoranda supplementary to the article in the "Admiralty Manual of Scientific Enquiry" have been collected by the officer in charge of the magnetic department of this office, Captain Evans, R.N., F.R.S., in great part from the results of the expeditions to the Antarctic regions in 1839-43 in H.M. Ships "Erebus" and "Terror" under Sir James Ross, and in the "Pagoda" in 1845; to be found in the several "Contributions to Terrestrial Magnetism" by Sir Edward Sabine, published in the Philosophical Transactions of the Royal Society, between the years 1841-70.

G. H. RICHARDS.

HYDROGRAPHIC OFFICE, ADMIRALTY,  
December 1872.

Magnetic surveys, whether on land or at sea, are considered to include, for the particular station or spot, the three component magnetic elements, namely, the Intensity or Force, the Inclination or Dip of the needle, and the Declination or Variation of the compass.

With regard to the general instructions for the determination of the magnetic elements on land, nothing can be added to those laid down in the "Admiralty Manual of Scientific Enquiry," except to enforce the preliminary caution (par. 10) of avoiding the neighbourhood, when possible, of rocks of igneous character,\* sandy beaches where iron particles abound, and buildings or localities where concealed iron above or under ground may possibly exist:—and especially to observe due care that when two magnetic elements are being observed at the same time the respective instruments may be so far separated as to prevent disturbance, and that the packing cases of the instruments containing spare magnets, are also removed to a suitable distance. That keys, penknives, steel buckles, &c., be removed from the dress of the observer, and that when the element of time is required magnets are not placed near the chronometer.

Magnetic observations made *at sea* differ from those made on land in the essential particular that they are subject to the disturbing influence of the iron of the ship, and these disturbing causes, even when reduced to their smallest practicable amount and kept as far as possible from the magnetic instruments, still exercise a disturbing influence which in high latitudes becomes excessive, and under any circumstances connected with the ship's geographical position, requires to be met by appropriate corrections.

#### *On the Measurements of the Magnetic Intensity or Force.*

With reference to the measurements of the magnetic force it must be remembered that they are of two kinds (1) those designed to determine the absolute value of the *horizontal component* of the force; and (2) those which have for their object to determine the ratio of the *total* force at different stations.

For the absolute determination of the horizontal component, the unifilar magnetometer is

\* St Helena, Ascension, Trinidad in the South Atlantic; the Auckland group, south of New Zealand, present familiar examples of disturbing rocks; many of the sandy beaches in New Zealand are largely formed of iron sand. The presence of disturbing rocks or other influences, can alone be determined by preliminary observations over the doubtful locality.

furnished to be used *on land*; and if the Inclination is at the same time observed, the Total Force in absolute measure is determined.\*

Observations to determine the relative values, or the ratio of the Total Force at different stations are made with the needles of Mr Fox's dip circle on a statical principle devised by that gentleman. This instrument is consequently available for prosecuting a magnetic survey on land as well as for its more general adaptation at sea, provided that the Intensities observed with it can be referred to a base station where the absolute determination of the Intensity has been effected.

The *Inclination or Dip* as determined at *land stations* is observed with Barrow's circle (furnished with two reversible needles) in accordance with the instructions, Appendix 2;—attention being paid to paragraph 9 thereof.

Especial care should be taken to preserve the axles of the needles of this instrument from rust; a serious defect, which is somewhat difficult to obviate in tropical climates without due caution.† It is desirable, therefore, that occasionally a few series of observations should be made in different azimuths, for the purpose of testing the axles of the needles.

In the ordinary mode of determining the Inclination, the final value corresponds to the mean of eight observed results. The observations are made with the face of the circle and face of the needle in different directions, in order to eliminate the error arising from the deviation of the line joining the zero points of the circle from the horizontal position, and the error arising from the deviation of the magnetic axis from the axis of form; the object of repeating the observations with the poles of the needles reversed, is to eliminate the error arising from the non-coincidence of the centre of gravity with the centre of motion.

For the purpose then of testing the axles of the needles (and the limb of the instrument) if  $\eta$  denote the observed Inclination of the needle,  $\theta$  the Inclination sought,  $\alpha$  the azimuth of the vertical circle—

$$\tan \theta = \tan \eta \cos \alpha.$$

The true Inclination may be inferred also from the observed Inclination of the needle, in any two planes at right angles to one another, without the knowledge of the angle  $\alpha$  according to the formula—

$$\cot^2 \theta = \cot^2 \eta + \cot^2 \eta'.$$

The difference between the mean of the results obtained by observation in different azimuths, and the result obtained by observations in the magnetic meridian, would be a constant correction for the errors of axle (and limb).

\* The relations between the several forces are as follows:—

Horizontal Force	×	<i>nat. secant</i> of Inclination	=	Total force.
"	×	" <i>tangent</i>	"	= Vertical force.
Total Force	×	" <i>cosine</i>	"	= Horizontal force.
"	×	" <i>sine</i>	"	= Vertical force.

† Paraffine oil is stated to be a good preservative against rust; greasy matter must, however, first be removed, or the oil will not remain on. In a few days after coating a large portion evaporates or runs off, leaving a protecting film. When the needles are required for use the film can be removed by dry warm blotting paper; the axles of the needles can be cleaned in *soft cork* previously perforating the cork with a small pin; the grit of hard cork is liable to groove the axle. Mercurial ointment should be carefully avoided as a preservative.

The *Inclination as determined at sea* is observed with Fox's circle in accordance with the instructions, Appendix 3;—care being taken to repeatedly determine the index correction due to the separate needles, with face of instrument both east and west, by comparison with the results made on land by Barrow's circle, *i.e.*, with the results determined by needles whose poles were reversed and the Inclination observed in the eight usual positions of the circle and needle. *Note*.—As the index correction is liable to vary as a function of the Inclination it should be determined in different inclinations.

The *Declination at land stations* can be determined with great accuracy by aid of the apparatus and special collimator magnet, attached to the Unifilar magnetometer. (*See* instructions, Appendix, Section I. No. 1.) It is an observation requiring, however, some time and much delicacy of manipulation.

As an auxiliary in the determination of this magnetic element, and to take its place when time or circumstances press, a Kater's azimuth compass of five inches diameter is furnished, with which the sun's magnetic bearing can be obtained by a process that obviates prism error.

This compass admits of being accurately levelled,—a most necessary precaution,—as the principal source of error to be apprehended in its use is from the sight vane leaning to the right or left, and not perpendicular to the horizon in the direction between the sun and the observer. Attached to the hinged sight vane is a short brass sliding frame, which carries the segment of a glass cylinder. By means of this piece of glass, when presented to the sun, the rays are collected into a linear focus; the line of light, which must appear narrow and well defined, being thrown (by sliding the glass along and inclining the sight vane) on a piece of ivory fixed so as just to come over the outer edge of the graduated circle of the card. This piece of ivory is marked with a line to serve as an index for reading off, by means of the prism, the graduated circle of the card.

This compass can also be used in the ordinary way for taking bearings by simply sliding the frame containing the segment of the glass cylinder to the top of the sight vane, when the hair will be seen which is used to bisect the object viewed by direct vision.

For the due preservation of the cap and pivot of this delicate instrument the sight vane (which moves on a hinge) can be folded down on the glass cover, and when thus folded it raises the needle of the compass by means of a lever under its centre, so as to press it against the glass cover, and prevent its moving. To prevent therefore the sudden jar of the jewelled cap on the pivot when about to use the compass, the hinged sight vane should be gently raised till the card duly finds its rest.

The *Declination (or Variation) as determined at sea* will of course be observed in the usual manner at the ship's Standard compass; but it is necessary that the index correction of this compass and the several cards employed should be occasionally determined by a comparison of the values of the Declination observed by them *on land* with that determined by the Unifilar magnetometer, or Kater's azimuth compass. This necessity for obtaining the index correction arises from the circumstances that though the Standard compass and its cards leave the compass observatory at Deptford in perfect and reliable adjustment, yet from usage—sometimes rough—incidental to long sea service, the prism may be slightly misplaced, the cards slightly shrunk or distorted, or the sight vane slightly out of adjustment: all causes affecting exact results.

*On the Observations required to determine the effect of the Ship's Iron on the Magnetic Instruments used on board.*

Positions have been selected in the ship in the most favourable locality with respect to neighbouring iron for the Standard compass and for Fox's circle. Although the instruments are within a few feet of each other, the effect of the ship's iron is sufficiently dissimilar at each position as to require the determination of the requisite coefficients for *both* instruments.

The determination of the deviations of the Standard compass by swinging the ship is an operation now familiar to navigators, the several processes are given in detail in the "Admiralty Compass Manual," and need not here be further referred to.

A few words are however necessary as to the determination of the deviations of a compass placed at the exact position of the Fox circle. At the time the deviations of the Standard compass are being observed, the compass specially furnished for the purpose should be placed on the Fox gimbal table, and an *exact* comparison made of the azimuth of the ship's head by it and the Standard compass: by the differences resulting from this comparison the deviations of the compass at the position of the Fox circle are accurately obtained.

When the ship is in all respects prepared for sea, that is, with the boats, guns, shot, and all other ironwork in the positions in which they are to remain at sea, the deviations of the Standard compass and Fox position compass would be observed, and when completed, the ship's head should be again successively placed on the sixteen (or eight) principal points of the compass, as would be indicated by the Fox position compass (this can of course be effected by aid of the Standard compass, a table of azimuths being prepared beforehand).

On each of these points the magnetic Inclination by the *direct* observation of Fox's circle on its gimbal table is then observed, as also the angle of deflection by one or both of the deflectors (as more convenient than weights), in the manner described in Appendix No. 3, paragraph 4, subparagraphs 1 and 2. Unless time and other favourable circumstances allow of these observations being made with face of instrument east and west, both on board and on shore, good results can be obtained with the face of the instrument in one direction, but it is then necessary to observe the Inclination on shore with the same needle and with the face of the circle in the same direction (to the east or west) precisely as when used on board, as well as the angle of deflection produced by the deflector also employed on board.

The observations which have been thus detailed should be repeated whenever the ship has so materially changed her geographical position as to have altered the magnetic Inclination  $30^{\circ}$  or  $40^{\circ}$ , or whenever she has undergone any change which may have made considerable alteration either in the amount or the distribution of her iron. It is also particularly desirable to repeat them in regions *where the Inclination is very small, or where it is very large*, and finally, they should be repeated without fail whenever the magnetic observations made on board are brought to a termination.

When the observations thus described have been carefully made and recorded, they furnish the means of calculating approximately all the corrections required to clear the magnetic observations made on board the ship in her successive passages from port to port, from the effect of the iron upon the needles of the Standard compass and of Fox's circle.

The complete investigation of the mathematical formulæ for the correction of the Declination Inclination, and Force, by Archibald Smith, Esq., F.R.S., will be found in the Philosophical Transactions for the years 1843, 1844, and 1846, in Nos. V., VI., and VIII. of the memoirs entitled "Contributions to Terrestrial Magnetism." \* The practical application of these formulæ to the corrections of the deviations of the Standard compass is divested of all technical difficulty, and rendered easy by the forms and tables given in the "Admiralty Manual of Compass Deviation" for calculating the coefficients, A, B, C, D, E.

The coefficients being known, the deviation ( $\delta$ ) on any point of the compass may be computed by the following equation (p. 112, 3d edition)—

$$\delta = A + B \sin \zeta' + C \cos \zeta' + D \sin 2\zeta' + E \cos 2\zeta'$$

$\zeta'$  denoting the azimuth of the ship's head by Standard compass; or the expression for  $\sin \delta$  may be put under the following form (p. 114)—

$$\sin \delta = A + \sqrt{B^2 + C^2} \sin (\zeta' + a) + D \sin 2\zeta' + E \cos 2\zeta'$$

in which  $a$  is the angle whose tangent is  $\frac{C}{B}$  and is nearly the easterly azimuth of the line of no deviation.

For the correction of the Inclination and Force, B and D are required, also the additional coefficients,  $c$ ,  $d$ ,  $A'$ .†

Of these coefficients D, E (and also  $A'$ ) may be expected to remain constant, or to have the same values in whatever part of the globe the ship may be, whilst no material alteration is made in the distribution of her iron. They may, therefore, be regarded as determined, once for all, by the deviations observed when the ship is first swung, though they may possibly be obtained more exactly by taking the mean of the values obtained on all occasions when that process is repeated. The coefficient A in the deviation formulæ may also be considered as constant, but as instrumental errors form a part of this coefficient, and varying values may result, these values when large may be considered as wholly due to that source.

B and C are variable coefficients, and depend on the Dip, and also on the proportion of the iron which changes its magnetic state cotemporaneously with changes in the geographical position of the ship, to the permanently magnetic iron;—or to iron of an intermediate quality, and of which the magnetism is neither permanent on the one hand, nor, on the other, are its changes cotemporaneous with changes of the Dip, but are consequent on such changes, and require a greater or less interval to conform to them. It is on account of the uncertainty of the law according to which these two coefficients B and C vary in different ships, that when a ship has changed considerably her geographical position it is desirable to repeat the process by which the values of these important coefficients may be redetermined.

Little difficulty need be experienced on this point, as by the aid of steam, or indeed under sail,

\* The reader of the "Contributions" will observe that in them, following M. Poisson, the *positive* values of  $\zeta$  and  $\zeta'$  are reckoned from North to West, the *negative* from North to East, contrary to the usage of the "Admiralty Manual of Compass Deviation." This however does not affect any of the formulæ contained in these instructions.

† In the notation of the "Admiralty Manual of Compass Deviation"—

$$c = \frac{g}{1+a} \quad d = \frac{1+k}{1+a} \quad A' = 1 + \alpha = \lambda (1 + D).$$

in a tranquil sea, towards sunset or sunrise, or when in sight of distant land, a complete set of deviations can be obtained in half an hour. Again, if we assume A and E to be zero, B and C can be determined at any time (D being known) by observing on any two cardinal points. Formulae for several methods of determining B, C, D, without completely swinging the ship, will be found in the "Admiralty Compass Manual," pp. 47-61. No difficulty would appear, therefore, to prevent B and C being determined for every  $10^\circ$  or  $15^\circ$  change of Dip in the ordinary prosecution of the ship's duties.

*To recapitulate*—For the Standard compass, in order to correct the observations for Declination made at that position, we require to know the coefficients A, B, C, D, E.

For Fox's circle position, in order to correct the observations for Inclination and Force we require to know the coefficients B, D,  $c$ ,  $d$ , A'.

For the corrections of the Inclinations observed at sea, the *variable* coefficients  $c$  and  $d$  may be computed from the disturbances on the several compass points shown by the observations of the Inclination with Fox's circle, when the ship was swung in harbour, by the formula—

$$c \cos \zeta + d \tan \theta = (1 - 2 \sin D) \sin \zeta \operatorname{cosec} \zeta' \tan \theta'$$

for all other points than north or south; and with the ship's head north or south by—

$$c \cos \zeta + d \tan \theta = (\cos \zeta + \sin B) \sec \zeta' \tan \theta'.$$

In these formulæ it must be observed that  $\zeta$  is the correct magnetic azimuth of the ship's head counted from the magnetic north,  $\theta$  the inclination observed on shore by Fox's circle;  $\theta'$  and  $\zeta'$  are the same elements observed by the needles of the Fox circle and Fox position compass on board.

[*Note*.—It may here be observed that the points of *no deviation* with the compass, become the points of *extreme deviation* of the Inclination and Intensity.]

With the values of  $c$  and  $d$  thus obtained, tables for the correction of the Inclinations observed on different courses at sea in all values of  $\theta$  may be computed by the formula—

$$\tan \theta' = \left(1 - \frac{c}{1 - 2 \sin D}\right) \cdot \left(\cos \zeta + \frac{d}{c} \tan \theta\right) \sin \zeta' \operatorname{cosec} \zeta',$$

on all points of the ship's course between N.E. and S.E., or N.W. and S.W., that is, when near the east or west points, and by the formula—

$$\tan \theta' = c \frac{\cos \zeta + \frac{d}{c} \tan \theta}{\cos \zeta + \sin B} \cdot \cos \zeta',$$

when the ship's course is nearer the north and south points; observing in either case that the values of  $\zeta'$  should be calculated by means of the Declination coefficients.

The coefficient A' required for the correction of the intensities of the Force observed *at sea*, may be computed by the subjoined formulæ from the observations of the Intensity made with Fox's circle on board compared with those made by the same instrument on shore, and with the known absolute value of the Total Force on shore ( $\varphi$ );  $\varphi'$  being the Total Force on board.

$\frac{\phi'}{\lambda' \varphi} \sin \theta' = c \cos \theta \cos \zeta + d \sin \theta$ , to be used when the Inclination is large.

$\frac{\phi'}{\lambda' \varphi} \cos \theta' \sin \zeta' = (1 - D) \cos \theta \sin \zeta$ , to be used when the Inclination is small.

This coefficient  $\lambda'$ , which is the  $\lambda (1 + \mathfrak{E})$ , or  $(1 + a)$  of the "Admiralty Compass Manual," can also be simply determined by observations made with a small vibrating needle, in the manner directed at pp. 69, 70, 71 (3d edition), for the determination of the directive force and  $\lambda$ . In these directions it will be seen that if the coefficients B, C, D are known, and the directive force of the small vibrating needle on board (H'),—found by dividing the square of the time of a fixed number of its vibrations on shore by the square of the time of the same number of vibrations made on board, and the product multiplied into the directive force of the needle on shore (H), which for convenience may be considered unity—then on any azimuth of the ship's head—

$$\lambda = \frac{H'}{H} \times \frac{\cos \delta}{1 + \mathfrak{B} \cos \zeta - \mathfrak{C} \sin \zeta + \mathfrak{D} \cos 2 \zeta};$$

a tabular form is given in the "Admiralty Manual," p. 71, for computing  $\lambda$  when made on several magnetic azimuths as the ship swings round.

[*Note*.—It is probable that  $\lambda$  in the "Challenger" will be found of a value so near unity as to be assumed = 1.0.]

In the correction of the Intensity observations, the arithmetical mean of the sixteen or eight determinations (as observed with the ship's head placed successively on each of the sixteen or eight principal points, as indicated by the Fox position compass), may be regarded as a result in which the disturbing influences on the several points may be considered to have balanced each other, and as a true measure of the force at the locality.

A table of corrections for the several azimuths can be formed by means of the equation—

$$\frac{\phi'}{\varphi} = \lambda' c \left( \frac{d}{c} \tan \theta + \cos \zeta \right) \cos \theta \operatorname{cosec} \theta',$$

$\theta$  and  $\zeta$  being obtained from the tables for correcting the Dips and Declinations.

#### *Method of calculating the Intensity Results. Fox's Circle.*

*With Weights*.—Presuming the magnetism of the needle to be constant, the intensity of the magnetic force in different localities is inversely as the sines of the angles of deflection, with a constant weight, or

$$I' = \frac{I \sin v}{\sin v'},$$

when  $I$  is the value of the Intensity,  $v$  the angle of deflection produced by a constant weight at a base station, and  $I'$  and  $v'$  the Intensity and angle of deflection at any other station; or if we express by  $\varphi$  the absolute value of the Force at a base station, and  $\varphi'$  the corresponding value at another station—

$$\varphi' = \varphi \frac{\sin v}{\sin v'}.$$

*With Deflectors.*—In the case of employing “deflectors” for “weights” (a measure which must often be resorted to at sea, where manipulation of the weights would cause undue exposure of the needle), the ratio of the Intensity in different localities is inversely as the sines of the angles of deflection, and directly as the weights equivalent to the deflecting force of the deflector on the needle at the respective angles; or

$$I = \frac{w' \cdot \sin v}{w \cdot \sin v'}$$

where  $v$  and  $w$  are the angle of deflection and equivalent weight at a base station, and  $I'$ ,  $v'$ , and  $w'$ , the Intensity, angle of deflection, and equivalent weight at any other station; or

$$\phi = \phi \frac{\sin v}{\sin v'} \cdot \frac{w'}{w} \text{ or, } \phi' = \phi \frac{\sin v}{w} \cdot w' \cdot \cos v'.$$

A table of equivalent or *coercing* weights is usually formed at a base station, for each of the deflectors on each of the needles, at the different angles which are likely to occur in the course of the observations with them. The table is formed in the following manner:—

The plane of the circle being perpendicular to the magnetic meridian, and the needle in its natural position of rest (which in such case is a vertical position), the deflector is placed successively at angles from the vertical, each differing one degree from the preceding; the needle is thereby deflected to an angle on the side of the vertical opposite to the deflector, and is brought back to its natural position of rest by weights applied to the grooved wheel on the axle. These weights are called the equivalent weights corresponding to the angle from the vertical at which the deflector was successively placed, and which ought to include all the angles likely to occur in the course of the observations. For greater accuracy the table is formed from results obtained by placing the deflector successively on either side of the needle.

If time or other circumstances prevent the table being formed in the manner just described, there is no other resource for reducing the observations made with the deflectors than to form a table from the observations of the weights and deflectors—when both methods have been employed at the same station—which shall answer the same purpose as a table of coercing weights.

The table may be thus formed:—For the primary or base station, let  $V$  be the angle of deflection with a constant weight  $W$ , and  $v$  the angle of deflection produced by the deflector placed at the dip, then is—

$$w = W \sin v \operatorname{cosec} V,$$

$w$  being the weight equivalent to the deflecting force of the deflector at the angle  $v$ . If several constant weights were used at the primary station, the value of  $w$  may be obtained from each separately, and an arithmetical mean taken.

Then at another station (of which there would be many at sea if very fine weather is experienced) at which the angles of deflection have been observed both with the deflector and with constant weights, the equivalent weight  $w'$  to the angle  $v'$  produced by the deflector may be obtained from

$$w' = \frac{I' w \sin v}{I \sin v'} \text{ or, } w' = w \cdot \operatorname{cosec} v \cdot I' \sin v',$$

$I$  being the Intensity at the primary station, and  $I'$  the intensity derived by the method of constant weights at the other station.

The values of  $w'$  thus computed for all the stations where the weights and deflectors were both used, being projected in a graphical representation with the corresponding values of  $v'$ , the former as ordinates the latter as abscissæ, a line drawn by the eye through the terminations of the ordinates will give the values of  $w'$  for each degree of  $v'$  produced by the deflector.\*

A non-continuity in the line freely drawn through the terminations of the ordinates, would point to a diminished force in the deflector; in this case, a second table for the value of  $w'$  corresponding to the period of the weakened force is requisite.

NOTE.—Mr Fox prefers using the *weights alone for determining the intensity*, as when the deflectors are used, it becomes necessary in comparing observations made at different epochs to ascertain not only the magnetic state of the needle itself at these epochs, but also that of the deflectors, as any change in either the needle or the deflectors will render the observations non-comparable.

It must be observed that if the needle or deflectors have lost magnetism the angle of deflection will be *less* when the deflectors are used, and *greater* when weights alone are used; whereas if the force of the earth's magnetism only should be diminished by a change of station, the angles will be increased by both methods. Nevertheless, under some circumstances the method by deflectors is preferable to the method by weights, as it avoids the risk of injury consequent on the exposure of the needle. This is particularly the case at sea; in bad weather more especially.

#### *Temperature Correction.*

*Needles.*—In the case of most needles their magnetic state is slightly influenced by the temperature becoming weaker with increasing and stronger with decreasing temperatures. It is necessary therefore to reduce the several results obtained with any particular needle to what they would have been had all the observations been made at an uniform temperature. This is done by applying a correction to the several values of  $I'$  calculated as before described. The correction (which is additive with increasing temperature when weights are used) is computed by the formula—

$$\text{temp: correction} = q I' (t' - t)$$

in which  $t$  is the temperature at the base station,  $t'$  the temperature at the station to which  $I'$  corresponds, and  $q$  a coefficient for  $1^\circ$  of Fahrenheit.

$q$  has occasionally been experimentally determined for each needle by observations in high and low temperatures at a magnetic observatory, where means existed for eliminating the actual changes of the magnetic force taking place during the time necessarily occupied by the experiments.

The temperature correction can also be obtained by placing the instrument under a glass receiver, and admitting heated air under it. The needle being deflected at a given angle from the Dip by a given weight, the increase in this angle, corresponding to an increase of temperature, being noted. Then

$$q = \frac{\phi - \phi'}{\phi' (t - t')}.$$

\* See "Contributions to Terrestrial Magnetism," No. III., Phil. Trans. for 1842, for a full account of this method of forming a table of equivalent weights.

[In the "Contributions to Terrestrial Magnetism," Nos. VII. and VIII., the values of  $q$  for seven different needles furnished to Fox circles are recorded; namely '000072, '000116, '000117, '000069, '000079, '000164, '000175, or a mean value of '000112. The influences of variations of temperatures on such needles are therefore extremely small; and, unless in cases when a more than ordinary accuracy is desired, the corrections on this account may be regarded as insignificant.]

*Deflectors.*—When deflectors are used, there is also a correction required for differences of temperature at the different stations; but as in this case the correction is for the changes of magnetism of the *deflector* due to the variations of temperature, it must be applied in the opposite sense to the correction when the constant weights are used; that is, when weights are used an increase of temperature gives an additive correction, and the contrary when the deflectors are used.

[The N. and S. deflectors of two Fox circles furnished for the Antarctic voyage of the "Pagoda," "Contributions to Terrestrial Magnetism," No. VIII., were respectively '000123, '000154, and '000081, '000133.]

#### GENERAL REMARKS.

Even at the risk of repetition, a brief recapitulation of the chief points to be observed in using Fox's circle on board ship will not be without value. The testimony of the late Admiral Sir James Ross on the merits of this instrument should not, however, be passed without notice, as it is probable that the instrument is scarcely, if at all, practically known, to naval officers of the present day.

In his "Antarctic Voyage," vol. i. chap. v., it is stated: "By means of the admirable contrivance of Mr R. W. Fox, we were able, in tolerably moderate weather, to determine the magnetic elements with even more precision on board our ships than they are susceptible of on shore, on account of the unknown and indeterminable amount of local attraction; and even in the heaviest gales, after a little practice with his instrument, they may be observed with sufficient exactness to afford very useful and important information."

"Throughout the whole distance of between three and four thousand miles, from Kerguelen Island to Van Dieman's Land, we could not have derived a single satisfactory result with the instruments in common use; and this portion of the ocean at least must for the present have remained a blank upon our charts. But with Mr Fox's apparatus, the Dip and Intensity observations were accomplished in an almost uninterrupted series of daily experiment."

An able writer on Terrestrial Magnetism (author of the Adams Prize Essay for 1865)\* describes it "as one of the most important additions to the existing stock of magnetic instruments ever made, not even excepting those introduced by Gauss." Alluding to the testimony of Sir James Ross, he adds: "The principal cause of this superiority of Fox's instrument in taking observations at sea is its stability, arising from the mode in which the needle is hung. As we have seen, the axis terminates in very short cylindrical pivots which work in jewelled holes. By this construction any displacement of the needle in consequence of the rolling or pitching of the vessel is prevented; whilst the loss of sensibility, which undoubtedly results from this mode of suspension, is a positive gain under such circumstances." †

\* Edward Walker, Esq., M.A., F.R.S. "Terrestrial and Cosmical Magnetism." The Adams Prize Essay for 1865. Cambridge and London, 1866.

† As there is no case recorded of Fox's circle having been used in a screw steam-ship, every precaution should be adopted to make observations at sea under favourable conditions. It is possible that the needle would require removal

“Another advantage offered by the instrument is the substitution of the statical for the vibration method, in observations on the Intensity. With the delicate suspension required in vibration experiments, such an observation, except in very rare circumstances, would be hopelessly impossible.”

In the Antarctic Magnetic Survey, performed in H.M. Ships “Erebus” and “Terror,” Fox’s circle was always used in the one selected spot in each ship. The face of the circle always towards the east (unless expressly mentioned otherwise), and the *marked* side of the needle *towards* the observer. The poles of the needle were at no time reversed, and great care was taken in mounting and dismounting it to avoid injury either to the axle or the pivot.

The index error, occasioned by the force of the needle being always directed towards the east, was examined by comparison with results obtained with needles whose poles were reversed.

The Dips were observed either “direct” or by the aid of “deflectors,” the intensities of the force occasionally by weights and occasionally by deflectors; on land always by both methods, and at sea occasionally so.

In the “Erebus” and “Terror,” in which the whole or nearly the whole of the disturbance arising from the ship’s iron was caused by induced magnetism, the deviation of the Declination *in the southern hemisphere* was a maximum to the east when the ship’s head was to the west, and to the west when the head was to the east, passing through its zero when the ship’s head was either north or south, or nearly so.\*

In the *Inclination and Total Force*, on the other hand, the deviation (*in the southern hemisphere*) was a maximum when the ship’s head was approximately either north or south, and passed through its zero as the ship’s head was directed towards the east or towards the west. The Dip of the south end of the magnet was least, and the south polar force greatest when the ship’s head was to the south; and the south Dip greatest and the south polar force least when the head was to the north.

*Precautions to be observed in the Use of Fox’s Inclination and Intensity Circle.*

1. The needles designed for observations of Intensity are never to have their poles inverted, and care must be taken not to place them inadvertently near other magnets or iron.
2. In replacing the needles and deflectors in the travelling box, care should always be taken that the poles of each occupy the places marked for them in the box.
3. When changing the needles at a land station, care should always be taken not to injure the jewels, or the terminations of the axle of the needles. When a needle is changed, it is desirable to hold it only by the grooved wheel, and not to touch the steel; and the pivot should first be put

from the circle at high rates of speed, in order to prevent the great jar on the axle and jewels from the screw motion. It is, however, believed that the employment of cushions of india rubber, or an equivalent elastic substance, under the legs of the instrument will obviate this presumable source of injury to the needles. Experiment will speedily determine the several points involved.

\* From the large amount of sub-permanent magnetism which is known to exist in the steam machinery of the “Challenger,” this reversal of the compass deviations from east to west in a general sense will probably not be experienced, unless indeed the ship attains a very high latitude on her southern exploration between the Cape of Good Hope and Australia.

into the *outer* jewelled hole, and the opposite pivot should be carefully guided into the hole at the back as the bracket is screwed up tight.

4. Unless there are particular reasons for a change, the same needle should always be used at sea, and kept always mounted, *being clamped before it is put away for the day.*

5. As the instrument is furnished with two needles for the observations of Intensity, each needle must be successively used in *land* observations, and the Inclination as well as the angles of deflection with constant weights observed with it.

6. Although every care is taken that all the weights which have the same nominal value should be equiponderant, it is desirable, if possible, to preserve the same identical weights throughout the whole observations of the same relative sines.

7. The thermometer attached to the circle must be observed at the commencement and close of the observations of Intensity, whether with deflectors or weights.

8. In reading the limb, be careful to bring the division nearest to the needle to coincide with the corresponding division of the second graduated circle immediately behind it, by which means parallax is avoided.

9. In preparing for an observation at sea, the circle must be turned in azimuth till its plane coincides with the magnetic meridian, when the ship is steady on her course, *i.e., the course by the Flax position compass.* If the zero division of the horizontal circle coincides with the fore and aft line of the ship, the plane of the magnetic meridian will be denoted by the vernier of the horizontal circle, showing an angle corresponding to the difference between the ship's course and the magnetic meridian.

10. As a general rule, the observations for the magnetic elements should be multiplied when the course of the ship lies at right angles to their several lines of equal amount, as delineated on magnetic charts. This specially applies to the determination of the Inclination and Force when in the neighbourhood of the magnetic equator (or line of no Dip), and also in the regions of least force.

Magnetic charts of the several elements are appended to these instructions for the requisite guidance.

## ADDENDA to the MAGNETICAL INSTRUCTIONS for the Voyage of H.M.S. Challenger, 1872.

The most favourable positions having been selected for placing the Fox circle, and the Standard compass in H.M.S. Challenger, a complete series of observations for the Dip, Intensity, and Deviation were made on board at Sheerness, just before the ship left in December 1872 for her voyage of exploration. The Dip and Intensity observations revealed the fact of a force acting upwards, unusual in amount for a wood-built ship. An inquiry into the nature of the construction of the ship, causing this unusual and unlooked-for disturbance, proved that this force resulted from a series of diagonal iron stringers, extending from the upper deck to near the keelson, employed to strengthen the frames of the after section; a condition quite unsuspected.

The formulæ given in the "Magnetical Instructions" for correcting the observations of Inclination and Intensity, were those which had so well represented the effect of the "soft" iron of H.M. Ships "Erebus" and "Terror."

A discussion of the observations made in the "Challenger" between England and the Magnetic Equator in the Atlantic Ocean shows, however, that this upward Vertical Force is principally produced by "hard" iron (not strictly constant), and involves the necessity of adding to the above-mentioned formulæ, coefficients representing the unsuspected force.

In the "Contributions to Terrestrial Magnetism," No. VI., by Sir Edward Sabine, published in the Philosophical Transactions for 1844, a memorandum by the late Mr Archibald Smith, M.A., LL.D., F.R.S., is inserted, in which formulæ are given introducing the required coefficients.

Let  $R$  represent the Vertical Force produced by the "hard" iron of the ship; then the following additions to the original Instructions are necessary:—

Page 10, line 21, after "the additional coefficients  $c, d, A'$ " introduce  $\frac{R}{A' H}$ .

„ 11, „ 27, after "we require to know the coefficients  $B, D, c, d, A'$ " introduce  $\frac{R}{A' H}$ , and

if we consider  $d \tan \theta + \frac{R}{A' H} = N$ , then—

„ 11, „ 29, after "the variable coefficients  $c$  and," omit  $d$  and substitute  $N$ .

The two succeeding formulæ at the bottom of page 11 become—

$$c \cos \zeta + N = (1 - 2 \sin D) \sin \zeta \operatorname{cosec} \zeta' \tan \theta'.$$

$$c \cos \zeta + N = (\cos \zeta + \sin B) \sec \zeta \tan \theta'.$$

„ 12, „ 7, after "With the values of  $c$  and  $d$ ," substitute  $N$  for  $d$ .

The two succeeding formulæ become—

$$\tan \theta' = \frac{c}{(1 - 2 \sin D)} \cdot \left( \cos \zeta + \frac{1}{c} N \right) \sin \zeta' \operatorname{cosec} \zeta.$$

$$\tan \theta' = c \frac{\cos \zeta + \frac{1}{c} N}{\cos \zeta + \sin B} \cdot \cos \zeta'$$

Page 12, line 17. For computing the coefficient  $A'$  the formulæ become—

$$\frac{\varphi' \sin \theta'}{A' \varphi \cos \theta} = c \cos \zeta + N.$$

$$\frac{\varphi' \cos \theta' \sin \zeta}{A' \varphi \cos \theta} = (1 - 2 \sin D) \sin \zeta.$$

„ 13 „ 18, after “A table of corrections for the several azimuths” the formula becomes—

$$\frac{\varphi'}{\varphi} = A' (c \cos \zeta + N) \cos \theta \operatorname{cosec} \theta'.$$

NOTE.— $N$ , as well as  $\sin D$ , should be computed at each base station where the ship is swung.

After a considerable change of magnetic latitude, especially if one station is near the Magnetic Equator, the proportions due to “hard” and “soft” iron in  $N$  may be computed by the two following equations—

$$\frac{R}{A'H} + d \tan \theta = N$$

$$\frac{R}{A'H} + d' \tan \theta' = N',$$

where  $\theta$  and  $\theta'$  represent the true Dip— $N$  and  $N'$  the computed values at the two geographical positions.

### III.—ABSTRACT of MAGNETICAL OBSERVATIONS made during the Voyage of H.M.S. Challenger, 1872-76.

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.		
	NORTH.	WEST.	WEST.	NORTH.		
1872. Oct. 20	51° 28' 1	0 18' 8	20 4' 2	67° 52'	10·271	Kew Observatory.
Dec. 6	51 26·2	- 0 43·7	...	67 39	10·28	Sheerness— <i>springing</i> .
22	49 41	4 44	21 7	67 2	10·42	at sea.
25	49 28	8 23	...	66 58	10·28	"
26	48 23	8 55	22 20	...	...	"
"	48 2	9 20	...	66 45	10·22	"
29	44 5	10 45	23 4	...	...	"
"	43 55	10 4	...	63 57	10·04	"
30	41 55	9 40	...	61 40	9·93	"
31	41 44	9 48	21 3	62 4	9·95	"
1873. Jan 1	40 26	9 42	20 24	...	...	"
2	40 4	10 5	...	60 51	9·83	"
6	38 43·2	9 8·3	20 3	59 28·5	9·645	Lisbon— <i>Magnetic Observatory</i> .
9	38 41·8	9 9·6	...	60 14	9·63	at anchor.
13	38 7	9 27	20 28	...	...	at sea.
14	38 16	9 48	...	59 43	9·75	"
15	37 6	9 24	20 27	57 39	9·62	"
16	36 25	8 12	20 50	56 57	9·59	"
17	35 55	7 1	...	56 49	9·38	"
22	36 8·4	5 20·1	18 28	56 27·6	9·446	Gibraltar— <i>Neutral ground.</i>
"	36 7·6	5 21·4	...	56 13	9·381	<i>Alameda.</i>
"	...	...	18 21	...	...	<i>Garden east of guardhouse.</i>
26	36 8	5 17	...	56 44	9·31	<i>springing.</i>
27	35 40	6 11	19 5	57 20	9·52	at sea.
"	35 18	6 30	22 15	...	...	"
28	35 44	8 14	20 10	57 50	9·32	"
29	36 13	10 12	21 25	58 44	9·39	"
30	36 23	11 18	21 11	59 5	9·40	"
31	35 20	13 5	21 46	58 10	9·43	"
Feb. 1	34 7	14 15	23 48	57 12	9·44	"
"	33 44	14 41	18 40	...	...	"
2	32 36	16 1	21 34	56 44	9·41	"
4	32 38	16 55·5	17 8	56 14·1	8·784	Madeira— <i>Casa Branca.</i>
"	32 37·6	16 55·3	18 25	...	...	<i>cliff W. of Loo rock.</i>

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
	NORTH.	WEST.	WEST.	NORTH.		
1873. Feb. 4	32° 37'	16° 54'	20° 33'	56° 36'	9.49	Madeira— <i>swinging</i> .
5	32 25	16 45	21 34	...	...	at sea.
6	30 0	17 0	21 48	55 44	9.25	"
"	29 19	16 38	22 23	...	...	"
10	28 40	16 0	...	52 4	9.20	"
11	28 20	17 30	20 18	51 15	9.09	"
12	28 0	17 30	...	52 20	9.17	"
"	27 59	17 0	18 3	...	...	"
13	28 28.5	16 14.7	21 48	55 18.5	9.546	Teneriffe, Santa Cruz.
14	28 28.4	16 14.3	...	52 42	9.23	at anchor.
15	27 22	16 57	20 7	52 6	9.04	at sea.
16	26 46	17 37	19 58	51 26	9.08	"
"	26 34	18 9	20 42	51 30	...	"
17	25 52	19 14	20 52	51 04	8.93	"
18	25 45	20 12	20 56	51 46	...	"
19	25 28	20 12	20 15	51 43	9.10	"
20	24 59	21 28	20 32	51 8	9.30	"
21	24 24	24 3	20 31	51 22	9.24	"
22	24 24	24 34	19 22	...	...	"
"	24 18	25 34	...	52 27	8.91	"
23	23 20	27 31	19 20	52 27	9.14	"
"	23 14	28 22	19 35	...	...	"
24	23 7	30 30	16 40	53 13	9.27	"
"	23 23	31 31	19 28	...	...	"
25	23 12	32 56	18 47	53 21	9.61	"
26	23 23	35 10	17 34	55 5	9.69	"
27	23 25	36 10	...	54 23	9.71	"
"	23 28	36 25	16 47	...	...	"
28	23 6	38 55	16 3	...	...	"
"	23 28	38 57	...	55 22	10.01	"
Mar. 1	22 45	40 37	14 54	55 33	10.00	"
2	22 30	41 56	14 24	55 38	9.84	"
"	22 28	42 20	...	55 52	9.86	"
3	21 57	43 29	12 46	55 26	...	"
5	21 2	46 25	11 24	55 13	9.75	"
6	20 40	48 25	...	54 58	10.22	"
"	20 49	48 45	8 19	...	...	"
7	20 39	50 20	...	55 4	10.11	"
"	20 39	50 33	8 25	54 42	10.17	"
8	20 13	52 6	...	54 6	10.31	"
"	20 9	52 14	7 44	54 47	...	"
9	19 59	53 28	6 20	...	...	"
"	19 57	53 55	...	52 16	10.24	"
10	19 41	55 13	4 16	53 2	...	"
11	19 20	57 15	3 58	52 14	10.39	"
"	19 18	57 30	...	52 12	...	"
12	18 56	59 35	...	51 3	10.29	"
13	18 54	61 28	1 10	50 35	10.28	"
14	18 40	62 56	0 29	...	...	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force,	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
	NORTH.	WEST.	WEST.	NORTH.		
1873.						
Mar. 15	18 40	63 20	° ...	48 43	10.12	at sea.
16	18 17	65 0	...	48 48	10.29	"
19	18 20	64 55	0 13	49 9.8	10.199	St Thomas— <i>North side of Carven hill.</i>
22	18 20	64 56	...	48 29	...	at anchor.
"	18 17	65 0	EAST. 0 5	49 1	10.21	springing.
23	18 38	65 8	WEST. 0 46	...	...	at sea.
26	19 41	65 8	0 34	...	...	"
27	20 50	65 16	0 29	...	...	"
"	21 21	65 12	1 5	54 7	10.70	"
28	22 57	65 16	1 38	55 10	11.13	"
29	24 39	65 28	1 46	...	...	"
30	26 13	65 20	2 57	59 12	11.53	"
"	26 50	65 5	2 58	...	...	"
April 1	29 4	65 1	4 45	62 33	11.86	"
2	29 42	65 7	4 36	62 51	12.01	"
"	29 48	65 27	...	62 27	12.08	"
3	31 26	65 0	5 40	...	...	"
"	32 0	64 59	...	65 10	12.55	"
June 5	32 17.2	64 53.3	5 56	67 2.8	...	Bermuda— <i>Taken island.</i>
April 7	32 18	64 53.5	5 9	65 44.2	12.345	<i>Cricket ground, Somerset.</i>
June 6	32 18.2	64 49	6 59	66 44.7	12.129	<i>Docking Stool, Mt. Langton.</i>
April 12	32 18.2	64 50.5	7 42	67 19.8	12.417	<i>Spanish point.</i>
11	32 18.2	64 49.5	8 54	67 20	12.362	<i>Gardic, Mt. Langton.</i>
9	32 18.7	64 52.2	5 58	66 27.6	...	<i>Cemetery, Ireland island.</i>
June 2	32 18.7	64 52	6 4	66 33.8	...	<i>Spar Yard.</i>
3	32 18.8	64 50	9 57	66 44	12.443	<i>Clarence cove.</i>
May 13	32 19.2	64 51.8	7 10	66 25.8	12.309	<i>green outside Dockyard.</i>
June 11	32 18.6	64 50.6	8 8	...	...	<i>Cobbler's island.</i>
April 12	32 22.6	64 42.6	7 15	...	...	<i>St George, Button island.</i>
14	32 18.6	64 53.4	5 4	...	...	<i>Octopus island.</i>
"	32 15.7	64 51.8	4 13	...	...	<i>Barge island.</i>
June 11	32 16.9	64 54.6	5 20	...	...	<i>Wreck hill.</i>
4	32 18.6	64 52.9	5 11	...	...	<i>Bouz island—bridge.</i>
April 7	32 19	64 51	9 26	66 46	12.30	at anchor.
22	32 0	65 9	...	65 4	12.46	at sea.
"	32 36	65 8	7 12	...	...	"
24	32 19	65 39	7 17	64 35	...	"
25	32 20	66 55	...	65 34	12.83	"
"	32 48	66 20	5 52	...	...	"
27	34 0	67 28	6 33	67 37	12.56	"
28	34 44	68 25	7 5	67 11	12.80	"
30	35 58	70 35	7 22	...	...	"

Date.	GEOGRAPHICAL POSITION		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
	NORTH.	WEST.	WEST.	NORTH.		
1873.						
May 1	36° 21'	71° 59'	4° 56'	...	...	at sea.
2	37 23	71 40	...	69 53	...	"
3	38 38	72 14	...	70 23	...	"
4	39 8	71 35	...	71 48	13-28	"
"	39 20	70 53	7 26	...	...	"
5	39 42	69 22	9 4	71 33	13-41	"
6	40 23	66 44	10 58	...	...	"
7	41 40	65 20	13 58	73 10	13-05	"
8	43 2	64 2	18 29	74 16	...	"
"	43 8	63 56	...	73 54	12-85	"
9	44 34	63 30	...	74 45	13-17	"
15	44 39-8	63 35-2	21 35	74 48-2	12-914	Halifax—Drillground, Dockyard.
20	43 7	63 39	19 54	73 38	12-86	at sea.
"	42 53	63 39	18 15	...	...	" <i>swinging.</i>
21	42 9	63 36	17 48	...	...	"
22	41 22	63 13	16 52	...	...	"
23	39 40	63 26	...	72 14	...	"
25	37 0	62 52	...	69 38	12-67	"
26	36 30	63 40	11 3	...	...	"
27	34 55	63 55	9 46	67 45	12-49	"
28	33 22	64 35	7 36	66 18	12-28	"
"	32 54	64 39	7 5	...	...	"
30	32 7	64 55	...	65 13	...	"
31	32 4	64 45	7 13	65 18	12-22	" <i>swinging.</i>
June 14	32 51	63 41	...	66 29	12-33	at sea.
"	32 54	63 22	8 19	...	...	"
15	33 40	61 33	10 15	67 7	12-26	"
16	34 27	58 56	12 52	...	...	"
17	34 53	56 50	14 3	67 59	12-18	"
18	35 3	53 1	...	68 13	11-93	"
19	35 28	50 50	18 9	...	...	"
20	35 33	50 24	17 43	...	...	"
21	36 6	49 12	19 49	68 13	11-63	"
"	36 33	47 58	19 19	...	...	"
22	37 8	45 40	...	67 49	11-57	"
"	37 24	44 15	21 41	...	...	"
23	37 54	41 44	24 21	...	...	"
24	38 3	39 20	24 3	65 38	10-97	"
25	38 23	37 22	25 31	...	...	"
26	38 25	35 53	26 1	65 22	10-80	"
27	38 18	34 41	25 2	...	...	"
28	38 20	33 34	...	66 29	10-55	"
"	38 30	33 17	24 43	...	...	"
29	38 0	31 50	...	64 58	10-18	"
"	38 1	31 25	25 30	...	...	"
30	38 32	31 10	24 43	64 40	10-20	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1873.	NORTH.	WEST.	WEST.	NORTH.		
July 1	38° 20'	29° 24'	...'	63° 19'	10.00	at sea.
3	38 20	27 0	...	63 25	9.88	"
4	37 53	26 20	...	61 29	9.76	"
9	37 45.3	25 40.5	24 49	63 56.8	10.678	Azores— <i>St Michaels</i> .
9	37 42	25 42	24 39	...	...	at sea— <i>swinging</i> .
10	37 10	25 0	...	63 57	9.62	"
11	36 27	23 47	23 0	64 11	9.69	"
12	35 15	21 54	23 11	61 53	9.68	"
13	34 22	20 23	22 22	60 18	9.61	"
14	33 46	19 17	...	60 8	9.52	"
15	33 21	17 50	...	57 37	9.14	"
17	32 38	16 55	20 33	55 12.5	9.184	Madeira.
18	31 15	17 40	20 56	55 27	9.04	at sea.
"	30 38	18 5	21 22	...	...	"
19	28 35	18 15	20 24	54 14	8.90	"
20	26 44	19 31	19 44	52 2	8.85	"
21	25 46	20 36	...	51 36	...	"
"	25 7	20 42	20 13	...	...	"
22	24 15	21 0	20 5	49 49	8.71	"
23	22 25	21 56	20 18	48 33	8.57	"
24	21 10	22 50	18 39	...	...	"
"	20 12	22 47	...	46 0	8.50	"
25	19 18	23 57	19 35	44 32	8.39	"
26	17 54	24 36	20 0	43 8	8.28	"
27	17 18	25 0	...	43 0	8.25	"
31	16 52.3	25 0	18 40	43 36.1	8.665	St Vincent— <i>Porto Grande</i> .
Aug. 2	16 52.5	25 0	17 19.8	...	...	" "
5	16 43	25 5	...	42 13	8.07	at sea.
6	15 58	24 41	19 7	41 4	8.01	"
10	14 24	23 23	17 39	37 34	7.96	"
11	12 43	22 48	19 32	35 31	7.82	"
12	11 53	20 50	19 48	32 43	7.53	" <i>swinging</i> .
13	10 23	20 22	19 45	31 12	7.41	"
14	9 29	18 55	...	27 8	7.42	"
"	9 30	18 39	21 3	...	...	"
15	8 37	18 10	...	24 59	7.23	"
16	7 10	16 15	20 39	20 8	7.16	"
17	6 48	16 32	20 2	20 24	7.24	"
"	6 36	17 1	...	20 31	...	"
18	6 23	16 17	20 42	19 0	7.14	"
"	5 57	15 33	...	18 24	...	"
19	5 48	14 20	21 11	16 38	7.00	" <i>swinging</i> .

Date.	GEOGRAPHICAL POSITION.		Declination. ( <i>Variation of Compass.</i> )	Inclination or Dip.	Total Force. ( <i>British units.</i> )	REMARKS.
	Latitude.	Longitude.				
1873.	NORTH.	WEST.	WEST.	NORTH.		
Aug. 20	4° 23'	13° 56'	21° 21'	13° 45'	7.08	at sea.
" 21	3 5	15 3	20 36	12 50	7.19	"
" 22	2 50	17 13	19 36	...	...	"
" 23	2 42	17 49	...	15 23	...	"
" 24	2 25	19 59	19 36	17 13	7.13	"
" 25	2 18	21 57	19 24	18 34	7.16	"
" 26	2 6	22 53	19 0	...	...	"
" 27	1 47	24 26	18 34	19 37	6.89	"
" 28	1 29	26 13	17 35	21 40	7.08	"
" 29	1 14	28 26	16 20	23 9	6.94	"
" 30	0 55.4	29 30	16 22	22 32.5	6.998	St Paul rocks.
" 31	0 55	29 30	15 51	22 30	6.94	at sea— <i>swinging.</i>
" 1	0 2'	30 13	15 18	22 33	...	"
" 2	SOUTH.					
" 3	1 51	31 1	14 51	19 39	6.89	"
" 4	2 29	31 18	14 4	18 25	6.81	"
" 5	3 33	32 20	13 19	16 53	6.84	"
" 6	3 50.7	32 25	14 26	...	...	Fernando Noronha—at anchor.
" 7	4 3	32 47	13 43	...	...	at sea.
" 8	4 52	33 35	13 0	...	...	"
" 9	5 6	33 47	...	16 22	6.73	"
" 10	4 41	33 3	13 24	15 33	6.81	"
" 11	5 46	34 27	12 22	15 7	6.65	"
" 12	6 4	34 51	12 55	15 6	6.53	"
" 13	6 16	34 33	12 53	15 10	6.49	"
" 14	6 57	34 41	12 28	13 20	6.55	"
" 15	7 31	34 4	...	12 32	...	"
" 16	7 32	34 16	12 23	11 40	6.48	"
" 17	8 30	34 36	12 19	10 6	6.34	"
" 18	9 12	34 52	11 57	9 48	6.36	"
" 19	10 8	35 20	11 16	7 22	6.19	"
" 20	10 46	36 2	10 48	5 55	6.21	"
" 21	11 54	37 12	9 58	6 22	6.24	"
" 22	13 0	38 20	...	4 18	6.01	"
" 23	13 6	38 7	9 7	...	...	"
" 24	12 59.3	38 31	9 9	4 2.5	5.988	Bahia.
" 25	12 56	38 30.5	8 59	...	...	"
" 26	13 47	38 0	8 56	2 20	...	at sea— <i>swinging.</i>
" 27	13 44	37 57	9 17	2 37	6.29	"
" 28	14 47	37 1	9 22	SOUTH. 0 46	6.17	"
" 29	15 12	36 56	9 57	...	...	"
" 30	16 39	37 0	9 58	4 42	5.90	"
" 31	17 19	36 42	10 30	5 22	6.04	"
" 1	18 50	35 51	10 0	9 2	5.99	"
" 2	19 22	35 24	10 24	9 35	5.99	"

Date.	GEOGRAPHICAL POSITION.		Declination. (Variation of Compass.)	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.				
1873.	SOUTH.	WEST.	WEST.	SOUTH.		
Sept. 30	20 15	35 18	10 13	11 17	5.96	at sea.
Oct. 1	21 56	35 42	9 53	13 34	5.98	"
2	24 28	34 31	10 46	18 22	5.92	"
"	25 6	33 51	11 33	20 3	...	"
3	26 15	32 54	11 24	...	...	"
4	27 29	31 29	11 52	24 6	5.79	"
"	27 54	30 44	13 1	...	...	"
5	28 48	29 16	13 4	26 31	6.04	"
6	29 34	28 9	12 57	...	...	"
7	29 1	26 19	15 52	...	...	"
8	31 15	26 59	15 43	29 3	6.12	"
10	35 25	23 40	...	34 13	...	"
11	35 40	20 51	16 37	38 8	6.24	"
12	36 0	18 27	18 3	38 16	6.32	"
13	36 10	14 45	20 5	39 38	6.44	"
14	36 12	12 18	21 4	...	...	"
"	37 27	12 17.2	23 5	40 39.8	...	Tristan d'Acunha.
15	37 1.7	12 18	20 47	...	...	at anchor.
17	37 24.2	12 28.2	23 8	...	...	Nightingale island.
17	37 20	12 18	21 15	41 24	6.36	at sea— <i>swinging</i> .
19	37 0	10 13	...	44 24	6.69	"
20	36 43	7 13	21 53	...	...	"
21	36 43	3 18	25 53	...	...	"
22	35 58	0 7	...	48 19	6.90	"
"	36 0	EAST.	28 30	...	...	"
24	36 2	5 2	...	51 32	7.10	"
25	36 14	8 21	30 36	...	...	"
"	36 22	8 42	...	53 16	7.47	"
26	36 0	10 33	30 29	...	...	"
"	35 57	11 9	...	55 42	7.58	"
27	35 35	16 7	30 36	...	...	"
28	34 40	17 40	...	55 58	7.81	"
Nov. 15	33 56	18 28.8	30 4	55 56.3	7.704	Cape of Good Hope Magnetic Observatory.
Dec. 11	33 53	18 27	...	56 54	7.68	Table bay— <i>swinging</i> .
17	34 23	18 37	...	55 30	7.90	at sea.
"	34 44	18 35	29 52	...	...	"
18	35 4	18 38	29 26	...	...	"
"	35 48	18 44	29 53	57 12	8.00	"
19	36 50	19 24	31 22	58 6	8.11	"
20	37 37	19 34	30 40	...	...	"
"	38 43	20 47	32 6	59 3	8.32	"
21	40 58	24 9	...	61 28	8.73	"
22	42 29	27 48	...	62 29	8.85	"
23	44 15	30 58	31 7	...	...	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
1873.	SOUTH.	EAST.	WEST.	SOUTH.		
Dec. 23	44° 48'	31° 19'	°	64° 12'	9.19	at sea.
"	45 8	32 31	32 28	...	...	"
24	45 54	34 32	34 34	...	...	"
25	46 30	36 29	...	66 6	9.57	"
"	46 30	37 20	34 17	...	...	"
26	46 50	37 49.2	33 44	...	...	Marion island.
"	46 50	37 52	...	65 14	9.67	at sea.
27	46 46	38 0	33 46	66 25	9.64	"
28	46 47	39 42	34 15	...	...	"
"	46 49	40 14	...	68 43	9.74	"
"	46 46	42 14	36 10	68 38	9.67	"
29	46 46	45 21	34 45	...	...	"
"	46 48	45 56	...	68 30	9.94	"
30	46 18	47 51	...	69 12	10.12	"
"	46 16	48 40	33 44	...	...	"
31	46 20	49 55	...	70 11	10.20	"
1874.						
Jan. 1	46 45	50 20	34 0	...	...	"
2	46 43	51 10	...	70 26	10.34	"
3	46 53	51 52	32 15	...	...	"
4	46 38	57 31	...	70 1	10.63	"
5	47 33	61 15	...	70 29	10.80	"
6	48 32	67 43	...	71 50	11.23	"
7	48 41	69 3	33 32.8	70 50	11.032	Kerguelen island— <i>Christmas harbour.</i>
13	49 8.2	70 11.5	34 0	71 47.1	11.422	<i>Betsy cove.</i>
28	48 52.7	69 28.2	...	72 0	...	<i>Howe's Foreland.</i>
9	49 27.6	70 4	33 33.7	...	...	<i>Accessible bay.</i>
19	49 8.3	70 10.7	35 54	...	...	<i>Hoy island.</i>
Feb. 2	51 52	71 19	32 55	...	...	at sea.
"	52 15	71 30	...	71 35	11.76	"
4	52 26	71 40	...	73 18	11.76	"
"	52 40	71 20	38 51	...	...	"
6	52 56	72 20	...	70 48	11.85	"
7	53 45	73 22	38 49	...	...	"
"	53 37	73 16	...	70 47	12.24	"
8	55 10	74 27	...	70 41	12.04	"
"	55 36	74 52	43 14	...	...	"
"	56 16	74 55	...	71 36	12.35	"
9	57 56	75 54	...	72 51	12.50	"
"	58 14	76 7	45 26	...	...	"
10	59 36	77 0	47 35	73 48	12.71	"
"	60 36	78 23	49 21	...	...	"
"	60 42	78 5	...	73 58	12.79	"
11	60 50	80 13	...	74 28	13.09	"
"	60 58	80 23	...	74 39	12.99	"
12	63 0	80 15	...	75 52	13.06	"
13	64 26	80 20	...	76 41	12.99	"
"	64 56	80 0	55 11	...	...	"
"	65 10	80 20	...	76 39	13.14	"
14	65 45	79 44	54 59	76 10	13.20	"

Date.	GEOGRAPHICAL POSITION.		Declination. (Variation of Compass.)	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.				
1874.	SOUTH.	EAST.	WEST.	SOUTH.		
Feb. 15	65 59'	78 24'	56 38'	77 11'	12.96	at sea.
16	66 28	77 53	...	76 14	12.94	"
"	66 31	78 24	56 48	...	...	"
17	65 10	79 51	...	75 46	13.10	"
"	65 24	78 21	55 29	...	...	"
18	64 50	84 49	...	76 40	13.25	"
19	64 45	85 57	57 41	...	...	"
20	64 0	87 40	...	77 22	13.38	"
"	63 56	88 41	...	78 9	13.50	"
"	63 43	87 50	57 0	...	...	"
21	63 30	89 8	...	77 54	13.75	"
"	63 30	88 57	56 26	...	...	" <i>swinging.</i>
22	63 41	91 24	56 35	78 18	13.71	"
"	63 30	90 47	...	79 27	13.73	" <i>swinging.</i>
23	64 16	93 51	59 4	...	...	"
"	64 11	93 11	...	78 56	13.80	"
25	63 39	95 23	...	79 26	13.87	"
26	62 26	95 44	...	79 36	13.78	"
27	61 33	97 49	49 53	79 5	13.84	"
28	59 17	100 14	...	79 0	13.81	"
Mar. 1	57 28	102 33	...	78 55	13.88	"
2	55 8	107 4	...	78 6	14.06	"
3	53 55	108 35	31 38	78 39	14.10	"
4	53 32	109 20	30 24	...	...	"
"	53 4	109 21	...	77 37	14.14	"
5	51 35	113 56	...	78 31	14.09	"
"	51 32	114 34	21 44	...	...	"
6	50 51	118 29	...	77 59	14.24	"
7	50 1	123 9	8 1	...	...	"
"	49 48	123 17	...	77 41	14.31	"
8	49 43	125 34	6 57	...	...	"
"	49 20	127 3	...	77 9	14.38	"
9	48 20	130 1	...	77 27	14.27	"
"	48 12	130 22	0 4	...	...	"
10	47 25	130 32	...	77 27	14.24	"
11	46 26	130 6	...	76 42	14.20	"
12	44 44	132 0	...	75 19	13.92	"
			EAST.			
"	44 12	132 42	1 36	...	...	"
13	42 40	134 11	3 17	...	...	"
14	41 28	136 18	...	71 44	13.69	"
"	41 19	136 55	2 51	...	...	"
15	39 34	141 14	...	69 34	13.47	"
16	39 13	142 56	...	69 7	13.39	"
24	37 50	144 58.7	8 35 "	67 5.8	13.173	Melbourne Magnetic Obser- vatory.
April 1	37 54	144 55	...	68 1	13.26	at sea.

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
1874.	SOUTH.	EAST.	EAST.	SOUTH.		
April 1	38° 10'	144° 56'	0° 4'	68° 13'	...	at sea.
2	39 13	146 32	...	68 52	13.34	"
3	38 24	148 51	...	68 20	13.20	"
4	36 59	150 19	9 57	...	...	" <i>swinging.</i>
5	36 13	150 15	...	65 5	12.92	" <i>swinging.</i>
6	33 52	151 20	...	64 16	12.66	"
May 18	33 52	151 15	9 27.9	62 45.4	12.605	Sydney— <i>Garden island.</i>
June 12	33 51	151 25	...	63 41	12.96	at sea.
13	34 15	151 54	...	64 27	12.71	"
16	34 20	155 6	10 29	63 5	12.54	"
17	34 53	155 30	10 5	...	...	"
18	34 39	156 9	10 37	63 53	12.57	"
19	36 33	157 50	...	64 7	12.63	"
"	36 37	158 12	11 38	...	...	"
20	36 58	160 26	12 5	64 59	12.72	"
21	37 56	163 30	...	65 2	12.47	"
22	38 40	166 17	14 11	66 1	12.59	"
23	38 53	169 32	13 2	...	...	"
July 6	41 17.5	174 48.3	...	65 14.2	12.599	Wellington— <i>Armourer's Bay.</i>
7	41 27	174 51	...	65 52	12.44	at sea.
"	41 40	175 11	...	65 54	12.49	"
"	41 34	176 15	15 17	...	...	"
8	40 16	177 26	...	64 45	12.35	"
"	40 27	177 44	14 52	...	...	"
9	39 19	178 35	...	63 19	12.22	"
"	38 31	178 58	13 30	...	...	"
10	37 47	179 31	...	61 10	11.93	"
"	37 12	179 43	12 5	...	...	"
		WEST.				
11	36 8	178 35	13 49	59 57	11.76	"
12	34 58	178 22	...	58 52	11.67	"
"	34 0	177 49	12 32	...	...	"
13	31 40	177 46	...	54 25	11.27	"
"	30 54	177 55	11 41	...	...	"
14	29 53	178 14	11 26	...	...	"
15	28 21	177 34	12 11	50 42	10.78	"
16	26 25	174 33	...	46 57	10.53	"
"	26 13	174 8	10 28	...	...	"
17	24 56	172 58	9 45	44 39	10.34	"
18	23 18	173 26	9 36	...	...	"
"	23 4	173 41	...	42 35	9.96	"
19	21 17	174 43	...	40 50	9.81	"
20	21 7	175 8	9 49	40 31.3	9.794	Tongatabu.
23	20 15	177 42	9 3	39 28	9.89	at sea.

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
	SOUTH.	EAST.	EAST.	SOUTH.		
1874.						
July 24	19° 11'	179° 42'	...	38° 23'	9.90	at sea.
25	19 10	178 22	...	39 32	9.67	"
31	17 41	178 49	9 16	36 42.4	9.458	Levaka.
Aug. 2	18 32	179 3	9 2	...	...	at sea.
6	19 3.5	178 10	8 42.5	38 36.5	9.765	Kandavu.
10-11	19 15	177 40	9 51	38 44	9.82	at sea— <i>sailing</i> .
13	19 0	175 56	9 46	39 11	9.69	"
14	19 1	175 9	9 51	39 39	9.76	"
15	18 29	173 46	...	38 29	9.76	"
16	18 7	172 6	10 35	38 42	9.83	"
17	17 29	169 12	...	38 13	9.94	"
19	16 54	165 54	9 32	38 39	9.85	"
20	16 34	163 27	9 12	...	...	"
"	16 31	163 2	...	38 26	9.88	"
21	16 0	161 5	8 36	38 22	9.84	"
22	15 21	159 3	8 47	37 41	9.95	"
23	14 48	156 22	7 45	...	...	"
"	14 50	155 18	...	37 14	9.86	"
24	14 4	153 36	7 0	36 33	9.78	"
"	13 59	153 12	6 45	...	...	"
25	13 52	152 1	6 54	36 42	9.77	"
26	13 44	151 9	6 38	36 55	9.81	"
27	13 11	149 24	5 52	36 31	9.80	"
"	13 6	148 37	6 13	...	...	"
28	12 43	147 0	5 33	35 46	9.75	"
29	12 8	145 10	5 11	35 24	9.64	"
30	11 44	144 52	5 23	...	...	"
31	11 47	143 36	...	34 55	9.59	"
Sept. 1	11 12	142 57	...	32 2	9.61	"
3	10 43.8	142 36.5	4 22	32 31.9	9.527	Cape York— <i>Admiralty island</i>
5	10 41.5	142 33	4 42	...	...	Port Albany— <i>Sestant rock</i> .
9	10 33	141 45	...	32 53	9.50	at sea.
10	9 57	139 29	4 21	32 5	9.49	"
11	9 30	137 35	4 0	31 30	9.44	"
12	8 59	136 16	3 10	30 23	9.41	"
13	8 14	135 5	2 59	28 58	9.33	"
14	7 12	134 17	2 1	26 53	9.21	"
15	6 34	133 58	2 14	...	...	"
16	5 45	131 8	...	22 34	9.05	"
18	5 45.2	131 14.2	2 33	24 3.6	9.00	Dobbo, Aru islands.
24	5 22	133 17	...	23 28	9.03	at sea.
25	5 34.7	132 44.5	2 27	...	...	Ki Doulan.

Date.	GEOGRAPHICAL POSITION.		Declination. (Variation of Compass.)	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.				
1874.	SOUTH.	EAST.	EAST.	SOUTH.		
Sept. 26	5° 48'	132° 14'	3° 27'	...	...	at sea.
27	5 44	132 2	...	24 24	8.99	"
28	5 30	130 44	3 4	...	...	"
"	5 29	130 8	...	23 56	8.82	"
29	4 42	129 55	...	21 36	8.95	"
Oct. 1	4 28	129 54	1 39	...	...	"
1-2	4 33.3	129 53.8	...	22 10	8.876	Banda island.
4	3 58	128 22	1 47	...	...	at sea.
"	3 46	128 5	1 50	20 48	8.71	" <i>springing.</i>
8	3 42	128 9.2	2 8.6	20 16.4	8.838	Amboina.
11	2 54	127 11	1 17	18 14	8.79	at sea.
12	1 46	127 5	1 57	15 55	8.78	"
13	0 48	126 59	1 55	...	...	"
"	0 22	126 56	...	12 47	8.58	"
14	NORTH. 0 43	126 41	1 59	10 52	8.44	"
16	0 47.2	127 20.7	...	10 46.7	8.409	Ternate.
17	0 58	127 22	...	10 26	8.43	at sea.
18	0 58	126 23	...	10 16	8.46	"
19	2 1	125 22	1 33	7 24	8.61	"
20	2 53	124 51	...	5 57	8.48	"
21	3 57	124 5	...	3 22	8.24	"
"	4 15	124 18	1 33	...	...	"
22	5 43	123 36	...	NORTH. 0 35	...	"
"	5 46	123 32	...	0 56	8.36	"
"	6 13	123 15	1 18	...	...	"
23	6 48	122 25	1 41	2 27	8.34	" <i>springing.</i>
25	6 55	122 4.1	1 42	2 35.2	8.239	Samboangan.
26	7 15	121 15	...	3 7	8.36	at sea.
27	8 30	121 55	...	6 14	8.30	"
"	8 54	121 59	0 31	...	...	"
28	10 11	122 13	...	10 11	8.42	"
30	10 42.2	122 34.2	1 45	10 34.8	8.15	Ilo-Ilo.
31	10 41	122 37	1 51	...	...	at sea.
"	11 2	123 1	...	12 19	8.31	"
Nov. 1	11 21	123 20	...	13 6	8.41	"
2	12 22	122 18	0 22	14 31	8.50	"
3	13 29	121 19	0 0	17 20	8.48	"
9	14 35.4	120 58.2	0 43	17 58.7	8.474	Manila.

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
	NORTH.	EAST.	EAST.	NORTH.		
1874.						
Nov. 12	14 58'	119 49'	...'	19 57'	8.67	at sea.
13	16 44	119 20	0 33	23 28	8.72	"
14	18 8	118 10	...	25 6	8.73	"
15	19 50	115 54	...	28 39	8.89	"
16	22 10	114 6	...	33 15	9.29	"
Dec. 7	22 17.3	114 10.2	0 57	32 20.4	9.193	Hong Kong—Korloon.
29	22 15	114 5	0 50	32 18	9.20	springing.
1875.						
Jan. 7	20 20	115 25	...	29 3	9.06	at sea.
"	19 56	116 6	0 31	...	...	"
8	17 54	117 19	0 39	...	...	"
9	16 41	117 45	0 38	23 14	8.83	"
10	15 40	119 15	...	18 11	8.62	"
"	15 11	119 38	0 30	...	...	"
15	13 35	121 0	...	15 8	8.45	"
			WEST.			
16	12 21	122 15	0 5	...	...	"
17	11 48	123 8	...	12 43	8.38	"
			EAST.			
20	10 17.5	123 54	0 58	9 17.6	8.191	Zebu.
25	9 36	123 40	1 30	7 24	8.24	at sea.
26	9 14	124 32	...	7 57	8.18	"
27	8 46	123 21	...	6 11	8.17	"
28	7 35	121 45	1 32	3 12	8.29	"
30	6 52	122 21	1 40	2 29	8.25	" springing.
31	6 55	122 4.1	1 40	2 30.8	8.247	Samboangan.
Feb. 6	6 36	123 4	1 7	...	...	at sea.
7	6 10	123 25	1 9	...	...	"
8	5 47	124 0	1 50	0 29	8.03	"
				SOUTH.		
9	5 34	125 29	...	0 24	8.27	"
"	5 26	125 53	0 48	...	...	"
10	4 38	127 4	1 47	...	...	"
11	4 33	128 46	...	1 57	8.13	"
12	4 19	130 15	3 41	...	...	"
13	4 18	130 45	...	2 52	8.28	"
14	3 40	132 38	...	3 7	8.29	"
"	3 43	133 2	2 10	...	...	"
15	3 14	133 37	2 4	...	...	"
16	2 49	134 4	2 46	5 13	8.26	"
17	2 39	134 59	2 2	6 19	8.39	"
18	1 58	135 43	...	8 1	8.22	"
"	1 47	136 20	2 9	...	...	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1875.	SOUTH.	EAST.	EAST.	SOUTH.		
Feb. 21	0° 8'	138° 24'	2° 58'	...	...	at sea.
22	0 44	139 4	3 2	12 55	8-56	"
23	2 14	140 35	...	16 26	8-83	"
25	2 9	141 36	3 36	...	...	"
"	2 14	141 21	...	15 48	8-72	"
26	2 2	142 20	3 45	15 20	8-63	"
27	1 53	143 19	...	15 7	8-62	"
"	2 1	143 41	3 7	...	...	"
28	2 28	143 58	3 50	16 42	8-60	"
Mar. 1	2 28	144 11	3 58	...	...	"
2	1 45	145 37	...	14 49	8-47	"
8	1 55	146 40	4 37	15 41-3	8-391	Admiralty islands—Observatory island.
11	0 42	146 59	4 33	...	...	at sea.
12	NORTH.	147 53	4 49	...	...	"
"	0 21	148 7	...	10 13	8-33	"
13	0 42	148 49	4 57	9 37	8-22	"
14	0 48	147 51	4 29	8 55	8-22	"
15	1 30	147 10	4 30	7 5	8-27	"
16	2 18	146 16	4 2	5 34	8-16	"
17	3 18	145 35	4 3	3 48	8-19	"
18	4 21	145 18	3 50	1 39	8-15	"
19	5 33	145 15	3 46	...	...	"
20	6 26	145 5	...	NORTH.		
"	6 31	145 33	3 55	2 33	7-91	"
21	7 52	144 20	3 38	...	...	"
22	9 36	143 56	2 56	5 14	7-91	"
"	10 22	143 38	2 14	8 46	7-83	"
23	11 27	143 15	2 37	...	...	"
24	13 2	142 45	2 22	12 18	7-90	"
"	13 34	142 41	...	15 29	8-01	"
25	14 46	142 12	1 46	16 57	7-99	"
26	16 4	141 49	2 48	19 13	8-09	"
"	16 18	141 45	...	...	...	"
"	16 39	141 42	...	21 51	8-24	"
27	17 31	141 21	0 42	22 38	...	"
28	18 24	141 11	1 2	23 49	8-23	"
"	18 32	141 11	0 41	25 8	8-29	"
29	19 27	141 13	0 39	...	...	"
30	20 11	141 0	0 19	27 7	8-28	"
31	21 17	140 40	WEST.	28 15	8-39	"
April 1	22 1	140 28	0 9	29 53	8-46	"
2	22 38	139 25	0 10	...	...	"
3	24 43	138 34	0 23	32 10	8-55	"
4	25 30	137 57	0 58	35 15	8-71	"
5	26 29	137 59	0 49	36 30	8-83	"
6	27 5	137 59	1 43	...	...	"
7	28 29	137 31	1 54	38 37	8-95	"
			...	41 2	9-09	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1875.	NORTH.	EAST.	WEST.	NORTH.		
April 8	29° 46'	137° 0'	0° ...	42° 29'	9·25	at sea.
9	31 13	137 10	...	44 23	9·39	"
10	33 8	138 26	...	46 48	9·46	"
11	34 33	139 10	...	48 18	9·67	"
13	35 25	139 42	3 36	48 58	9·70	Yedo bay— <i>swinging</i> .
May 8	35 26	139 39	3 56	48 48·7	9·699	Yokohama.
13	34 30	138 16	...	48 11	9·71	at sea.
18	34 41	135 12	4 19	48 38·5	9·910	Kobé.
27	34 22·2	133 6·5	...	48 28·3	...	Miwara bay.
28	34 18	133 20	...	48 15	9·92	at sea.
June 3	32 42	136 4	...	45 58	9·63	"
6	35 25	139 42	...	48 31	9·79	Yedo bay— <i>swinging</i> .
17	34 37	140 46	EAST.	46 43	9·57	at sea.
18	34 43	144 6	...	46 20	9·38	"
19	35 19	147 22	...	46 34	9·35	"
20	35 34	150 41	...	46 40	9·30	"
22	35 26	156 21	2 4	46 35	9·09	"
24	35 30	160 48	4 11	46 42	9·03	"
25	35 21	164 18	5 38	47 4	8·93	"
26	35 24	166 38	6 25	...	...	"
27	35 23	168 15	...	47 19	8·94	"
"	35 22	168 54	7 46	...	...	"
28	35 22	169 57	8 1	47 57	8·97	"
29	35 41	171 37	8 52	49 3	8·88	"
30	36 22	174 11	...	49 21	9·08	"
"	36 23	174 31	8 40	...	...	"
July 1	36 10	176 8	9 35	49 54	9·05	"
2	36 10	178 15	10 38	...	...	"
3	35 51	179 43	...	50 32	8·96	"
"	35 49	179 57	WEST.	...	...	"
4	36 38	179 55	11 4	...	...	"
"	36 58	179 0	11 13	51 1	9·11	"
"	36 58	179 0	...	51 54	9·24	"
5	37 44	176 59	11 32	...	...	"
6	38 11	175 43	...	53 18	9·32	"
7	37 59	171 43	...	53 48	9·40	"
8	37 48	169 14	...	54 35	9·48	"
"	37 46	168 31	13 21	...	...	"
9	37 49	166 48	14 1	...	...	"
"	37 49	166 25	...	55 0	9·65	"
10	37 55	163 46	14 42	54 57	9·72	"
11	37 43	161 47	...	55 15	9·77	"
"	37 41	161 35	13 52	...	...	"
12	37 52	160 15	14 23	55 59	9·85	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1875.	NORTH.	WEST.	EAST.	NORTH.		
July 12	37° 52'	160° 17'	14° 18'	...'	...	at sea— <i>swinging</i> .
13	37 54	158 32	...	56 11	9-93	"
"	37 56	157 49	15 10	...	...	"
14	38 8	156 34	14 43	56 42	10-10	"
15	37 27	155 27	...	55 47	9-97	"
"	37 32	155 1	14 18	...	...	"
16	37 8	154 54	14 35	56 8	10-19	"
"	36 14	154 45	...	55 38	10-02	"
17	35 12	154 13	13 35	54 18	9-89	"
18	34 22	154 55	13 7	53 11	9-74	"
19	32 45	154 48	...	51 46	9-61	"
"	32 40	154 35	12 37	...	...	"
20	31 1	154 28	12 19	50 0	9-44	"
21	30 20	154 55	11 43	49 24	9-37	"
22	29 11	154 43	11 20	48 7	9-26	"
23	27 38	154 55	10 33	46 32	9-11	"
24	26 28	155 10	10 5	45 9	8-94	"
25	24 54	155 37	9 24	43 20	8-78	"
26	22 51	156 14	9 29	40 45	8-61	"
31	21 18	157 51	9 34-1	39 56-7	8-512	Sandwich island— <i>Honoruru</i> .
Aug. 11	21 15	157 53	8 47	39 38	8-45	<i>swinging</i> .
15	19 25	155 17-5	...	35 27	8-308	Hilo— <i>Kivancak</i> Volcano.
16	19 25	155 17-5	9 5	38 17	8-606	<i>Croter</i> , 1st station.
19	19 43-9	155 4	7 29	38 39-2	8-698	" 2d station. <i>Cocunut island</i> .
19	19 53	154 51	...	37 26	8-43	at sea.
20	19 2	154 3	7 35	36 26	8-47	"
21	17 32	153 34	...	34 9	8-32	"
"	17 29	153 24	7 51	...	...	"
22	15 42	153 2	6 43	31 13	8-11	"
23	14 16	152 34	7 23	29 14	8-06	"
24	13 15	152 2	6 55	27 26	8-00	"
25	12 41	152 0	6 27	26 35	8-02	"
26	11 16	152 5	6 36	23 52	7-90	"
27	10 38	152 10	6 8	23 1	7-90	"
"	10 20	151 41	5 49	22 22	7-89	"
28	9 27	150 48	6 24	20 56	7-94	"
29	8 37	150 2	...	19 15	7-89	"
30	7 34	149 50	6 17	17 3	7-96	"
31	7 8	149 31	...	18 20	7-92	"
Sept. 1	7 22	147 22	...	16 59	7-80	"
"	6 55	147 21	5 52	15 35	7-86	"
2	5 54	147 1	5 51	...	...	"
3	4 32	147 45	5 32	11 36	7-73	"
"	3 37	147 45	...	9 10	7-72	"
4	2 19	149 11	5 5	6 10	7-70	"

Date.	GEOGRAPHICAL POSITION.		Declination. (Variation of Compass.)	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.				
	NORTH.	WEST.	EAST.	NORTH.		
1875.						
Sept. 5	1° 4'	150° 37'	4° 46'	3° 56'	7.70	at sea.
"	0 28	150 40	...	3 1	7.73	"
	SOUTH.					
6	0 35	151 35	5 23	0 27	7.70	"
7	2 8	152 33	4 46	2 11	7.77	"
"	2 50	152 28	...	4 2	7.68	"
8	3 48	152 56	5 29	...	...	"
9	4 42	153 9	...	8 12	7.80	"
"	5 12	152 52	4 35	8 58	7.76	"
10	6 19	152 40	5 3	10 49	7.87	"
"	6 43	152 23	...	11 42	7.81	"
11	7 26	152 14	5 19	13 28	7.87	"
12	8 18	151 59	...	15 22	7.92	"
13	9 51	151 7	...	17 38	7.98	"
"	10 26	150 35	4 56	19 0	8.06	"
14	11 19	150 28	6 1	20 49	...	"
15	12 0	150 20	...	21 46	8.18	"
"	12 32	149 59	6 4	22 51	8.18	"
16	13 31	149 30	6 47	24 39	8.27	"
17	14 53	149 41	6 42	27 15	8.41	"
"	15 48	149 41	7 29	28 33	8.50	"
18	17 8	149 49	...	29 52	8.58	"
29	17 31.5	149 33.5	8 2.5	30 3.3	8.358	Tahiti.
"	17 31.2	149 32.8	7 35	...	...	"
Oct. 3	17 31	149 34	7 51	29 53	8.62	swinging.
4	18 46	149 50	...	32 44	8.77	at sea.
5	20 44	150 16	...	36 39	9.01	"
"	21 22	150 10	7 32	...	...	"
6	22 22	150 17	9 12	39 41	9.31	"
7	23 32	150 9	9 27	41 20	9.43	"
8	24 47	148 5	...	42 55	9.52	"
"	24 56	147 44	8 35	...	...	"
9	26 0	145 21	8 39	...	...	"
"	26 14	145 3	...	45 59	9.58	"
10	27 34	143 7	8 56	46 53	9.61	"
"	27 46	142 15	8 56	45 20	9.69	"
11	28 24	141 18	8 55	47 19	9.74	"
"	28 30	141 12	8 2	...	...	"
12	29 30	140 31	9 28	47 57	9.74	"
13	30 49	139 18	...	50 6	9.95	"
"	31 2	139 1	9 49	...	...	"
"	31 16	138 36	...	50 44	10.04	"
14	32 36	137 42	...	51 26	10.21	"
15	33 12	135 14	9 50	53 4	10.23	"
16	33 29	133 18	10 16	53 50	10.18	"
17	34 5	131 37	11 10	...	10.35	"
18	35 53	132 27	10 42	51 52	10.67	"
19	36 36	132 53	11 12	53 56	10.79	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)			
	SOUTH.	WEST.	EAST.	SOUTH.		
1875.						
Oct. 20	38 47'	133 23'	...	56° 49'	11-15	at sea.
"	39 15	133 14	...	57 37	11-21	"
21	40 6	132 55	12 55	58 56	11-22	"
22	40 4	131 40	...	58 33	11-01	"
"	39 56	131 26	11 31	...	...	"
23	39 41	131 23	10 28	...	...	"
"	39 47	130 55	...	58 26	...	"
24	39 28	127 44	11 17	57 50	10-95	"
25	39 16	124 1	12 15	57 2	10-67	"
26	39 13	120 55	...	56 32	10-64	"
"	39 13	120 21	12 14	...	...	"
27	39 13	118 42	13 16	55 56	10-57	"
28	38 56	116 20	...	55 55	10-60	"
"	38 57	115 12	13 0	...	...	"
29	38 45	112 56	14 2	54 52	10-47	"
30	38 43	111 21	...	54 22	10-38	"
"	38 44	110 31	14 26	...	...	"
31	38 30	108 14	...	54 24	10-16	"
"	38 52	107 10	14 13	...	...	"
Nov. 1	39 5	104 52	17 13	53 22	10-11	"
2	39 18	101 38	...	52 59	9-94	"
"	39 19	100 26	16 29	...	...	"
3	39 18	98 34	18 46	52 37	9-79	"
4	38 42	96 38	...	50 4	9-52	"
"	38 38	95 52	17 16	...	...	"
5	38 10	94 15	17 44	48 44	9-36	"
6	37 53	93 57	18 47	48 39	9-35	"
7	37 25	93 40	18 14	48 22	9-26	"
8	37 57	90 56	17 44	48 13	9-21	"
9	38 5	87 47	18 54	47 17	8-91	"
10	38 17	84 51	20 1	46 8	8-67	"
11	37 23	83 1	19 1	43 21	8-53	"
12	36 1	81 34	...	40 44	8-24	"
"	35 33	81 2	...	40 6	8-19	"
13	34 20	79 38	16 40	38 3	7-95	"
15	33 37-6	78 53	...	39 39-7	8-13-8	Juan Fernandez.
16	33 54	76 38	...	36 47	7-59	at sea.
17	34 6	73 49	...	35 12	7-50	"
"	33 53	73 52	16 45	...	...	"
18	34 1	72 4	...	34 9	7-51	"
Dec. 4	33 1-5	71 38-5	15 27-3	33 47-3	7-400	Valparaiso.
11	33 0	71 37	15 7	32 34	7-40	swinging.
12	32 34	74 17	...	33 52	7-58	at sea.
"	32 46	74 10	16 0	...	...	"
13	33 19	74 22	15 12	34 18	7-64	"
14	33 31	74 44	16 8	35 23	7-64	"
15	33 12	76 23	16 38	35 45	7-75	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1875.	SOUTH.	WEST.	EAST.	SOUTH.		
Dec. 16	32° 53'	77° 2'	16° 33'	35° 45'	7.91	at sea.
17	33 42	78 19	17 10	38 19	7.92	"
18	34 19	78 53	16 43	38 18	8.05	"
19	35 16	81 45	...	40 38	8.36	"
20	36 19	83 53	...	43 1	8.59	"
21	37 10	83 6	...	42 59	8.65	"
"	37 11	82 53	18 11	...	...	"
22	37 29	84 1	18 33	44 13	8.73	"
23	38 43	83 43	19 1	...	...	"
"	38 58	83 48	...	45 24	9.01	"
24	39 44	86 24	...	47 1	9.17	"
"	39 45	85 55	18 47	...	...	"
25	40 32	89 20	20 30	48 53	9.43	"
26	41 2	87 59	...	48 46	9.42	"
27	42 18	84 33	...	48 10	9.50	"
"	42 27	83 49	19 21	...	...	"
28	42 44	82 15	19 41	47 46	9.32	"
29	43 12	80 7	...	47 16	9.16	"
"	43 27	79 40	18 58	...	...	"
30	44 48	78 40	19 48	...	...	"
"	45 2	78 36	...	48 42	9.44	"
31	45 42	76 20	...	48 36	9.14	"
"	46 49.5	75 19.2	...	48 52	9.393	Tent point, Port Otway.
1876.						
Jan. 1	47 54	74 42	...	49 50	9.51	Messier channel.
2	48 19	74 33	...	49 43	9.64	"
"	48 26	74 29	21 8	50 41.8	...	Middle island.
3	48 55	74 20	21 43	50 15.6	9.688	Gray's harbour.
5	49 53	74 22	...	50 26	9.94	at sea.
6	50 11.4	74 46	20 52	...	...	Tom bay.
9	51 0	74 12	...	51 49	10.001	Puerto Bueno.
10	52 10	73 36.5	...	53 5	9.985	Isthmus bay.
12	53 0.5	73 59.5	...	54 49	10.535	Port churruca.
13	53 54	71 20	...	53 17	10.10	at sea.
17	53 9.5	70 53.5	20 58	53 3.7	10.104	Sandy point.
"	53 10	70 45.2	21 18.5	...	...	"
20	52 21	67 39	18 9	...	...	at sea.
21	51 33	65 33	...	49 17	9.34	"
"	51 26	64 48	16 33	...	...	"
22	50 56	60 35	15 19	...	...	"

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.		
	SOUTH.	WEST.	EAST.	SOUTH.		
1876.						
Jan. 26	51° 40' 7	57° 51' 2	14° 11'	48° 4' 6	9-016	Falkland islands—
Feb. 1	51 32	58 7	14 25	48 0-1	9-012	Stanley harbour.
						Port Louis.
4	51 34	57 52	13 44	48 9	8-95	Berkeley Sound— <i>swinging</i> .
7	50 55	56 10	12 30	47 45	8-73	at sea.
8	48 47	55 39	11 27	46 45	...	"
9	48 18	56 10	11 22	44 23	8-30	"
10	45 50	56 3	11 17	41 12	8-07	"
"	44 48	56 14	9 47	...	...	"
11	42 39	56 31	10 7	...	...	"
12	41 40	54 52	8 47	36 40	7-25	"
13	39 21	54 20	6 59	32 54	7-13	"
14	37 2	53 57	6 40	31 29	6-78	"
21	34 53-7	56 14	8 32	29 48-9	6-700	Monte Video—
25	34 59	56 11	8 1	...	...	<i>swinging</i> .
25	35 0	55 55	...	29 4	6-74	at sea.
26	35 22	53 35	7 25	29 19	6-64	"
27	35 25	52 35	...	30 6	6-69	"
"	35 35	51 35	5 2	...	...	"
28	35 40	50 40	4 15	...	...	"
29	36 8	48 13	2 37	...	...	"
Mar. 1	36 2	47 46	...	29 52	6-47	"
"	36 4	47 25	1 46	...	...	"
2	36 44	46 14	1 36	29 58	6-53	"
4	36 56	42 54	...	30 3	6-43	"
5	37 33	41 47	...	31 27	6-43	"
			WEST.			
"	37 34	41 31	1 59	...	...	"
6	37 38	39 46	3 54	31 27	6-38	"
7	37 31	36 22	6 12	32 23	6-34	"
8	37 44	33 24	8 23	34 8	6-29	"
9	37 46	30 53	9 59	...	...	"
"	37 38	30 30	...	34 23	6-16	"
11	36 26	26 6	...	34 5	6-33	"
12	35 53	24 18	...	34 37	6-19	"
13	35 37	21 2	18 13	37 26	6-14	"
14	35 45	18 31	19 3	...	...	"
"	35 35	18 14	...	38 9	...	"
15	34 15	15 57	21 41	38 7	6-17	"
16	32 20	13 5	23 3	37 27	6-12	"
17	30 37	13 12	22 40	35 53	6-06	"
"	30 49	13 13	...	36 4	6-01	"
18	27 13	13 16	...	33 37	5-87	"
19	25 5	13 33	23 56	31 30	5-87	"
20	23 46	13 50	24 10	...	...	"
"	23 29	13 49	...	28 27	5-94	"
21	21 21	14 2	24 23	...	...	"
22	20 10	13 58	...	25 1	5-90	"
"	19 30	13 56	23 57	23 50	5-95	"
23	17 51	13 53	...	22 37	5-88	"

Date.	GEOGRAPHICAL POSITION.		Declination. (Variation of Compass.)	Inclination or Dip.	Total Force. (British units.)	REMARKS.
	Latitude.	Longitude.				
1876.	SOUTH.	WEST.	WEST.	SOUTH.		
Mar. 23	17° 3'	13° 51'	23° 56'	20° 59'	5.97	at sea.
24	15 30	13 41	23 52	18 37	5.93	"
"	14 32	13 42	23 45	17 15	5.91	"
25	13 2	13 43	23 41	15 56	5.97	"
"	12 12	13 44	24 8	15 18	5.99	"
26	10 42	13 44	23 10	13 3	6.01	"
27	8 33	13 57	...	8 30	6.05	"
"	8 23	14 15	22 50	...	...	"
29	7 55.7	14 25.5	23 6	7 56.1	6.133	Ascension— <i>George Town.</i>
30	7 56.7	14 21	22 32	9 57.2	6.217	Green Mountain.
April 3	7 54	14 26	22 41	7 33	6.10	Ascension— <i>swinging.</i>
4	6 30	14 26	22 40	5 4	6.24	at sea.
"	5 41	14 27	23 14	...	...	"
5	4 41	14 32	22 23	1 38	6.28	"
"	3 47	14 36	22 26	NORTH. 0 25	6.37	"
6	2 41	14 40	22 21	...	...	"
"	2 16	14 38	...	3 0	...	"
7	1 37	14 33	22 27	4 44	6.58	"
"	0 22	14 26	22 10	5 58	6.69	"
"	NORTH. 1 17	14 8	22 0	8 43	6.83	"
"	1 58	14 16	21 17	10 45	6.86	"
9	3 27	14 51	21 44	13 45	6.90	"
10	4 50	14 47	...	16 10	7.03	"
"	5 32	14 48	21 28	17 47	7.18	"
11	7 0	15 4	21 23	20 41	7.30	"
"	7 38	15 21	21 25	21 39	7.30	"
12	8 42	16 17	20 47	24 18	7.49	"
"	9 15	16 47	20 49	26 25	7.52	"
13	10 23	17 42	20 45	28 36	7.64	"
"	10 58	17 50	21 0	29 11	7.71	"
14	11 16	18 12	20 58	30 10	7.66	"
"	11 38	19 4	...	31 32	7.70	"
15	11 56	20 57	20 18	33 15	7.88	"
"	12 32	21 29	20 43	34 11	7.93	"
16	13 35	22 43	21 8	36 33	8.10	"
"	14 22	23 37	...	38 48	8.22	"
17	14 54	23 30.7	...	39 34.8	...	Cape de Verde islands— <i>Quil island, St Iago.</i>
18	16 11	24 17	21 7	...	...	at sea.
19	16 54	25 5	19 54	42 52	8.54	St Vincent— <i>swinging.</i>
22	16 52.8	25 1	18 52	43 6.5	8.577	St Vincent island.
27	17 16	26 19	20 4	...	...	at sea.

Date.	GEOGRAPHICAL POSITION.		Declination.	Inclination	Total Force.	REMARKS.
	Latitude.	Longitude.	(Variation of Compass.)	or Dip.	(British units.)	
1876.	NORTH.	WEST.	WEST.	NORTH.		
April 27	17° 21'	26° 42'	... 1	44° 16'	8.63	at sea.
" 28	17 46	28 18	19 8	...	...	"
" "	17 53	28 44	...	46 13	8.71	"
" 29	18 4	30 2	19 43	47 16	9.01	"
" 30	19 17	30 32	19 34	...	...	"
" "	19 59	30 34	19 26	49 21	9.19	"
May 1	21 32	31 14	19 6	51 9	9.37	"
" 2	22 8	31 29	19 24	52 3	9.46	"
" "	23 13	32 22	18 37	53 20	9.66	"
" 3	24 5	32 39	19 50	54 27	9.65	"
" 4	25 40	33 29	20 8	56 12	9.98	"
" "	27 30	34 36	19 16	57 57	10.11	"
" 5	28 26	35 2	20 46	58 52	10.24	"
" "	29 36	35 57	21 20	59 59	10.13	"
" 6	30 30	36 9	21 34	60 51	10.19	"
" "	31 57	36 8	22 9	62 5	10.62	"
" 7	32 26	36 6	22 7	...	...	"
" "	34 10	34 33	22 31	63 27	10.77	"
" 8	34 38	34 3	23 5	63 23	10.62	"
" "	35 24	33 22	23 34	63 30	10.75	"
" 9	36 20	33 28	24 57	63 30	10.81	"
" "	37 31	33 48	24 57	65 38	10.94	"
" 10	38 33	33 23	25 0	65 58	10.97	"
" "	39 48	32 27	26 1	66 37	11.01	"
" 11	40 43	31 56	27 4	66 32	10.97	"
" "	41 41	31 45	25 59	67 31	11.00	"
" 12	42 15	30 50	25 49	...	...	"
" 13	42 50	28 44	26 22	67 35	10.87	"
" 14	42 33	27 39	26 30	67 42	10.71	"
" 15	43 1	25 7	25 59	67 23	10.72	"
" "	42 33	23 0	...	66 37	10.65	"
" 16	42 27	22 24	24 36	...	...	"
" 17	41 56	20 51	24 23	66 34	10.34	"
" 18	42 1	18 13	23 5	64 54	10.15	"
" 19	42 36	15 27	23 13	65 9	10.17	"
" 20	42 46	12 28	...	64 9	10.02	"
" 21	43 38	9 42	21 3	...	...	"
" 22	43 52	9 29	...	64 1	10.12	"
" 23	47 16	6 57	...	66 6	10.14	"
June 1	51 26	EAST. 0 42.3	...	67 32.7	10.269	Sheerness— <i>Ile of Grain.</i>
" 2	51 26.2	0 43.7	...	67 35	10.23	<i>swingy.</i>
July 20	51 28.1	WEST. 0 18.8	19 30	67 45	10.281	Kew Magnetic Observatory.

# IV.—ABSTRACT of MAGNETICAL OBSERVATIONS made at LAND STATIONS, prefaced with descriptive references to the Observation spots.

1. KEW OBSERVATORY, . . . . .  $\left\{ \begin{array}{l} \text{Lat. } 51^{\circ} 28' 6'' \text{ N.} \\ \text{Long. } 0^{\circ} 18' 46.5'' \text{ W.} \end{array} \right.$

In the small wooden house at the end of the garden where the Unifilar Magnetometers are examined.

2. LISBON, . . . . .  $\left\{ \begin{array}{l} \text{Lat. } 38^{\circ} 43' 13.1'' \text{ N.} \\ \text{Long. } 9^{\circ} 8' 20.5'' \text{ W.} \end{array} \right.$

At the Magnetic Observatory in the new "absolute" house attached to the Observatory of the Infante Dom Luiz.

3. GIBRALTAR, . . . . .  $\left\{ \begin{array}{l} \text{Lat. } 36^{\circ} 8' 24'' \text{ N.} \\ \text{Long. } 5^{\circ} 20' 24'' \text{ W.} \end{array} \right.$   $\left\{ \begin{array}{l} \text{Lat. } 36^{\circ} 7' 36'' \text{ N.} \\ \text{Long. } 5^{\circ} 21' 24'' \text{ W.} \end{array} \right.$

*a.* On the neutral ground near the Spanish lines, close to the 300 yards stone. Soil sandy.

*b.* On the walk above the Grand Parade, near the site where the officers of the Austrian frigate "Novara" made observations; which later is now occupied by two heavy guns. The site was selected with a view to comparing the results at the two epochs, but the whole parade is so surrounded with guns and shot that no reliance can be placed on the observations. The Horizontal Force notwithstanding is the same as on the neutral ground; the Inclination less by  $13'$ .

4. MADEIRA, . . . . .  $\left\{ \begin{array}{l} \text{Lat. } 32^{\circ} 38' 0'' \text{ N.} \\ \text{Long. } 16^{\circ} 55' 30'' \text{ W.} \end{array} \right.$   $\left\{ \begin{array}{l} \text{Lat. } 32^{\circ} 38' \text{ N.} \\ \text{Long. } 16^{\circ} 55'' \text{ W.} \end{array} \right.$

*a.* The place selected on the first visit, in February 1873, was a little off the new road to the west of Fort Pontinha and near Casa Branca, but the local disturbance was so great as to destroy all hope of satisfactory results. At one foot above the ground the Inclination was  $48^{\circ} 46' \text{ N.}$ , whilst on the observing stand,  $3\frac{1}{2}$  feet above the same spot, it was  $56^{\circ} 18' \text{ N.}$

The Declination at this place differed  $4^{\circ}$  from that found on board the ship.

*b.* On the second visit in 1873, a place was found on the new road, on the Alameda near the bridge over the Rio Secco, although the ground was of a promising nature, yet even here the Inclination differed as much as  $40'$  in two places 20 yards apart.

The Standard compass was set up at about 20 yards from the Unifilar position.

5. SANTA CRUZ, . . . . .  
 { Lat.  $28^{\circ} 28' 30''$  N.  
 { Long.  $16^{\circ} 14' 40''$  W.

On a bridge on the main road: surrounding country level. The stones about the spot were of lava, some of them magnetic, but on the whole there was little disturbance.

6. ST THOMAS ISLAND, . . . . .  
 { Lat.  $18^{\circ} 20'$  N.  
 { Long.  $64^{\circ} 55'$  W.

On the north side of Careen hill, under a tree 10 yards from the beach, and just opposite Water Island. No local disturbance.

Besides this station one observation was taken on Rupert rock for Inclination, and one for Declination. At the remaining four stations the Declination alone was observed. These show signs of local disturbance.

7. BERMUDA,

On account of the discordant results obtained in these islands observations were made at nine different stations. It was found that all the magnetic elements varied exceedingly in a short distance.

The Inclination at the Cricket Ground, Somerset island, was  $65^{\circ} 44'$  N., whilst at Mount Langton, in the same latitude, and only 4 miles to the eastward, it was  $67^{\circ} 30'$  N. There was also a difference of  $3^{\circ} 45'$  in the Declination between the same places.

- { Lat.  $32^{\circ} 19' 12''$  N.  
 { Long.  $64^{\circ} 51' 48''$  W.

On the green outside the dockyard, near a large blue stone opposite Mitchell's store. This spot has alone been specially described, as here the best value of the Declination was obtained.

8. HALIFAX, N. S., . . . . .  
 { Lat.  $44^{\circ} 39' 48''$  N.  
 { Long.  $63^{\circ} 35' 12''$  W.

On the drill ground in the dockyard, a grassy spot 50 paces W. by S. from Observatory hill. The weather was unfavourable for making good observations. On the morning, after a brilliant display of aurora the Declination observed was  $50'$  less than that of two days before; in the afternoon it had returned to its former amount,  $21^{\circ} 40'$  W.

9. ST MICHAEL, AZORES, . . . . .  
 { Lat.  $37^{\circ} 45' 18''$  N.  
 { Long.  $25^{\circ} 40' 30''$  W.

On a lawn in the garden of Senhor José de Canto.

10. ST VINCENT, CAPE DE VERDE ISLANDS, . . . . .  
 { Lat.  $16^{\circ} 52' 30''$  N.  
 { Long.  $25^{\circ} 0' 0''$  W.

On the beach to the west of the town, 100 yards S.  $35^{\circ}$  W. of the monument to Mrs Hope (and a little to the westward of a small hill

but not near enough to be affected by it). The stones on this hill influenced the magnet strongly when brought near.

11. ST PAUL ROCKS, ATLANTIC OCEAN, . . . . . { Lat.  $0^{\circ} 55' 24''$  N.  
 { Long.  $29^{\circ} 30' 0''$  W.

On the southern rock to the S.W. of the peak marked 60 feet on the Ross's chart, published in Sir J. Ross's "Voyage in Southern and Antarctic Regions," vol. i., 1847. The rock was principally serpentine, and had no influence on the magnets.

12. BAHIA, . . . . . { Lat.  $12^{\circ} 59' 18''$  S.  
 { Long.  $38^{\circ} 31' 0''$  W. *b.* { Lat.  $12^{\circ} 56' 0''$  S.  
 { Long.  $38^{\circ} 30' 30''$  W.

*a.* On the green outside the public gardens, about 15 yards from a large tree at the farther end, 30 yards from the rails of the tramway, and 15 yards from the telegraph wires.

*b.* On the beach S.E. of Fort Mont Serrat.

13. TRISTAN D'ACUNHA, . . . . . { Lat.  $37^{\circ} 27' 0''$  N.  
 { Long.  $12^{\circ} 17' 12''$  W.

In a depression on Julia point, a grassy slope about 30 feet above the sea. There was not time for more than one observation of Declination with Kater's compass, and one Inclination. These give evidence of local disturbance when compared with the results obtained on board by swinging and at anchor.

14. CAPE OF GOOD HOPE, . . . . . { Lat.  $33^{\circ} 56' 3''$  S.  
 { Long.  $18^{\circ} 28' 45''$  E.

At the Observatory, Cape Town. The Inclination was observed in the Inclination house, and the remainder of the observations in the Declination house.

15. KERGUELEN ISLAND, . . . . . { Lat.  $48^{\circ} 41'$  S. *b.* { Lat.  $49^{\circ} 8' 12''$  S. *c.* { Lat.  $48^{\circ} 52' 42''$  S.  
 { Long.  $69^{\circ} 3'$  E. { Long.  $70^{\circ} 11' 30''$  E. { Long.  $69^{\circ} 28' 12''$  E.

*a.* The first station was at Christmas harbour, on the site of Ross's Magnetic Observatory in 1840—still easily recognised from his description. No local attraction; but the wind, which blew in heavy gusts, interfered very much with the observations.

*b.* In Betsy cove. Here, as at Christmas harbour, great difficulty was experienced from the strong gusts of wind, which overthrew the tent and shook the instruments. A sheltered position was tried, but it was so boggy and yielding under foot, that it was given up. The place finally selected was on hard rock, at the head of the cove. Both

this station and station C show marked local disturbance when compared with that at Christmas harbour.

c. On Howe's Foreland, close to the water's edge, abreast of the anchorage. The wind, the swampy ground, and the confined situation made it difficult to observe.

16. MELBOURNE,                    { Lat.     $37^{\circ} 49' 53''$  s.  
                                     { Long.  $144^{\circ} 58' 42''$  E.

At the Government Observatory. In the "absolute" house of the Magnetic buildings.

17. SYDNEY,                        { Lat.     $33^{\circ} 51' 54''$  s.  
                                     { Long.  $151^{\circ} 14' 47''$  E.

On Garden island, 50 yards north of the established observation stone. (Chosen to avoid the iron now near the stone.)

18. WELLINGTON,                { Lat.     $41^{\circ} 17' 30''$  s.  
                                     { Long.  $174^{\circ} 48' 20''$  E.

In Armourer bay, at the foot of Mount Victoria. On a grassy mound 100 yards in shore from the middle of the bay, and a little way s.w. of a house with gardens. This spot was free from local attraction, but the observations were much interfered with by stormy weather. The absence of the sun prevented observations for true bearing, and therefore the Declination.

19. TONGATABU,                 { Lat.     $21^{\circ} 7' 0''$  s.  
                                     { Long.  $175^{\circ} 8' 0''$  W.

On a grass plot under a large tree 180 yards to the westward of the King's House, Nukalofa. Coral foundation.

20. KANDAVU, FIJI ISLANDS,   { Lat.     $19^{\circ} 3' 30''$  s.  
                                     { Long.  $178^{\circ} 10' 0''$  E.

Near the beacon on the south point of Ngaloa island.

21. LEVUKA, FIJI ISLANDS,    { Lat.     $17^{\circ} 41' 0''$  s.  
                                     { Long.  $178^{\circ} 49' 0''$  E.

In a cocoanut plantation on the beach to the northward of the town, and near the cricket-field. Ground sandy, covered with grass. No evidence of local attraction, although the island is of volcanic formation, and sand collected from neighbouring beaches contains iron.

22. PORT ALBANY, CAPE YORK, { Lat.     $10^{\circ} 43' 40''$  s.  
                                     { Long.  $142^{\circ} 36' 15''$  E.

On a rising mound about 200 yards from the beach of Port Albany, near the N.E. corner of Admiralty ground, and with the N. side

of Ida island in transit with Seymour point. Red clay ground with broken scoria, not magnetic.

23. DOBBO, ARU ISLANDS, . . . . .  
 { Lat.  $5^{\circ} 45' 15''$  s.  
 { Long.  $134^{\circ} 14' 15''$  E.

On a grass plot between the village and the forest, nearly in line with the main street, and 40 yards s.s.w. from a well at the end of it, 26 yards s. by E. from another well. Free from disturbing causes.

24. AMBOINA, . . . . .  
 { Lat.  $3^{\circ} 41' 40''$  s.  
 { Long.  $128^{\circ} 9' 15''$  E.

On a level piece of grass, 100 yards from the shed of the coaling station at Point Mungayen, and nearly in line with the direction of the pier. The observing table was at the northern part, near the embankment which surrounds the grass plot. The ground contained iron, but in very small quantities. Stones, serpentine and mica schist.

25. TERNATE, . . . . .  
 { Lat.  $0^{\circ} 47' 25''$  N.  
 { Long.  $127^{\circ} 20' 45''$  E.

In a grass field surrounded by trees, 100 yards inland from the coaling pier, and about 50 yards from the owner's house. Although the neighbouring hills were covered with volcanic sand, containing much iron, they were sufficiently distant from the observation spot to avoid magnetic disturbance.

26. SAMBOANGAN, . . . . .  
 { Lat.  $6^{\circ} 55' 0''$  N.  
 { Long.  $122^{\circ} 4' 5''$  S.

A small grass field in a cocoanut plantation, 600 yards to the westward of the church, and 100 yards from the beach. The earth contained very little iron, the stones being decomposed lava.

The same spot was used on the second visit, the heat on that occasion being intense.

27. ILO-ILO, . . . . .  
 { Lat.  $10^{\circ} 42' 15''$  N.  
 { Long.  $122^{\circ} 34' 15''$  E.

260 yards N.E. of the fort on the extremity of the sandy spit near the town of Ilo-Ilo.

28. MANILA, . . . . .  
 { Lat.  $14^{\circ} 35' 25''$  N.  
 { Long.  $120^{\circ} 58' 15''$  E.

On the exercising ground near a lunette, on the s. side of the city, 63 paces from a tree about the middle of the Alameda, near the beach; 98 paces from the main road running east and west, and 60 yards from the telegraph wire.

- 29 HONG KONG, . . . . .  
 { Lat.  $22^{\circ} 17' 20''$  N.  
 { Long.  $114^{\circ} 10' 10''$  E.

On Kowloon hill, just over the police station on the point. The following true bearings were taken :—

The clock opposite the landing place at Hong Kong, N.  $139^{\circ}$  W.  
 The flagstaff on Stonecutter's island, N.  $46^{\circ}$  W.

Soil, clay and decomposed granite, apparently free from magnetic attraction.

30. ZEBU, . . . . .  
 { Lat.  $10^{\circ} 17' 30''$  N.  
 { Long.  $123^{\circ} 54' 0''$  E.

The site was selected on open ground, just inside the outer circle of the Plaza de Magelhaens, and 60 yards from the S.W. angle of the fort. The ground consisted of sand and shells.

31. ADMIRALTY ISLANDS, . . . . .  
 { Lat.  $1^{\circ} 55' 0''$  S.  
 { Long.  $146^{\circ} 40' 0''$  E.

On Observation island, Nares Bay—a small island covered with shingle and shells.

32. YOKOHAMA, JAPAN, . . . . .  
 { Lat.  $35^{\circ} 26' 0''$  N.  
 { Long.  $139^{\circ} 39' 0''$  E.

On the Bluff in the middle of the parade, Camp of the Royal Marines. Soil, mould and gravel. The nearest iron visible was in a well 60 yards off.

33. KOBÉ, JAPAN, . . . . .  
 { Lat.  $31^{\circ} 41' 3''$  N.  
 { Long.  $135^{\circ} 12' 15''$  E.

On the south end of the Mole at the east side of the Land concession. The Mole is composed of blocks of granite with a sandy beach near: no iron.

34. MIWARA BAY, JAPAN, . . . . .  
 { Lat.  $34^{\circ} 22' 15''$  N.  
 { Long.  $133^{\circ} 6' 30''$  E.

On the beach just above high-water mark, close to the little creek that cuts off Matsuhama on the N.W. side. The beach consists of shingle, and borders the neighbouring paddy fields.

35. HONORURU,  
 SANDWICH ISLANDS, . . . . .  
 { Lat.  $21^{\circ} 18' 0''$  N.  
 { Long.  $157^{\circ} 51' 0''$  W.

On the spit to the southward of the town, 200 yards S.W. of the Observatory occupied by the Transit of Venus Expedition, 1874.

36. HILO, SANDWICH ISLANDS, .  $\left\{ \begin{array}{l} \text{Lat. } 19^{\circ} 43' 51'' \text{ N.} \\ \text{Long. } 155 \quad 4 \quad 0 \text{ W.} \end{array} \right.$

On Coconut island. Rocks consisting of lava, and very magnetic. There was no better place available.

37. TAHITI, PAPIETÉ, . . .  $\left\{ \begin{array}{l} \text{Lat. } 17^{\circ} 31' 30'' \text{ S.} \\ \text{Long. } 149 \quad 33 \quad 30 \text{ W.} \end{array} \right.$

On a grassy mound in the wood, 200 yards to the eastward of the Arsenal on Point Farente.

On Point Venus the lighthouse (with iron railings) now occupies the site chosen by former observers. The spot at Papiete was selected with a view to its being possibly occupied by succeeding observers.

38. JUAN FERNANDEZ ISLAND, .  $\left\{ \begin{array}{l} \text{Lat. } 33^{\circ} 37' 36'' \text{ S.} \\ \text{Long. } 78 \quad 53 \quad 0 \text{ W.} \end{array} \right.$

On the beach eastward of Fort Juan Bautista, and 50 yards north of the landing place. The soil is good wheat ground, the stones about the spot are of lava, and the hills at the back contain basalt.

39. VALPARAISO, . . .  $\left\{ \begin{array}{l} \text{Lat. } 33^{\circ} \quad 1' 30'' \text{ S.} \\ \text{Long. } 71 \quad 38 \quad 30 \text{ W.} \end{array} \right.$

On the hill over Hara's Yard, in a sheltered spot at the head of the ravine.

True bearings from spot,  $\left\{ \begin{array}{l} \text{Point Piedra, } \text{N. } 88^{\circ} \text{ E.} \\ \text{Point Concon, } \text{N. } 35^{\circ} \text{ E.} \\ \text{Lighthouse, } \text{N. } 16^{\circ} \text{ W.} \end{array} \right.$

40. MESSIER CHANNEL, CHILE,  $a. \left\{ \begin{array}{l} \text{Lat. } 48^{\circ} 26' \text{ S.} \\ \text{Long. } 74 \quad 29 \text{ W.} \end{array} \right. \quad b. \left\{ \begin{array}{l} \text{Lat. } 48^{\circ} 55' \text{ S.} \\ \text{Long. } 74 \quad 20 \text{ W.} \end{array} \right.$

$a.$  On Middle island. The spot selected was on a large granite rock, but the observations did not give satisfactory results.

$b.$  Gray harbour. On a large granite rock (which covers at high water) on the west side of the entrance to the harbour. The hill rising above this rock was covered with soft moss, quite unfit for setting up the instruments.

41. SANDY POINT, .  $\left\{ \begin{array}{l} \text{Lat. } 53^{\circ} \quad 9' 30'' \text{ S.} \\ \text{Long. } 70 \quad 53 \quad 30 \text{ W.} \end{array} \right.$   
MAGELLAN STRAIT,

On the low ground to the eastward of the town. Soil sandy, covered with bushes.

True bearings from spot,  $\left\{ \begin{array}{l} \text{The Blockhouse, } \text{N. } 75^{\circ} \text{ W. } 450 \text{ yards.} \\ \text{Coal Agency Flagstaff, } \text{S. } 41^{\circ} \text{ W.} \end{array} \right.$



47. ST VINCENT,                    { Lat.  $16^{\circ} 52' 45''$  N.  
       C. DE VERDE ISLANDS,    { Long.  $25^{\circ} 1' 0''$  W.

The same site occupied as on the visit in 1873, described in No. 10.

48. SHEERNESS,                    { Lat.  $51^{\circ} 26' 15''$  N.  
    { Long.  $0^{\circ} 42' 20''$  E.

On Isle of Grain, opposite Sheerness Dockyard.

49. KEW OBSERVATORY,           { Lat.  $51^{\circ} 28' 6''$  N.  
    { Long.  $0^{\circ} 18' 46\cdot5''$  W.

In the wood-built house at the bottom of the garden, where the original observations were made.

## V.—ABSTRACT of MAGNETICAL OBSERVATIONS at LAND STATIONS,

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	WEST.		WEST.	WEST.
1.	Kew, . . . . .	1872. Oct. 31.	3 30 P.M.	20° 4' 2"	...	° ... '	20° 4' 2"
2.	Lisbon, . . . . .	1873. Jan. 9.	4 0 „	20 3.1	...	...	20 3.1
3a.	Gibraltar ( <i>Neutral ground</i> ),	21.	3 20 „	18 22.3	Kater.	18 21.2	
		22.	1 13 „	18 33.5	Alt. and Az. B. 172.	18 40.0 18 12.5	18 28.0
3b.	„ ( <i>Parale ground</i> ),				Kater. Barrow. Alt. and Az.	18 15.8 18 17.8 18 39.3	18 21.0
4a.	Madeira, . . . . .	Feb. 4.	9 30 A.M.	17 8.0			17 8.0
	„ ( <i>cliff west of Loo rock</i> ),				Kater. Barrow. Alt. and Az. B. 172.	19 35.3 18 27.8 18 49.3 16 49.3	18 25.0
5.	Teneriffe, . . . . .	8.	3 7 P.M. 4 20 „	21 47.5 21 48.0			21 48.0
6.	St Thomas ( <i>Carreen hill</i> ),	Mar. 18.	4 0 „	EAST. 0 35.6	Kater. Barrow. B. 172 A. B. 172 J.	0 4.3 0 11.3 0 16.3 0 16.3	0 13.0
	„ ( <i>Green cay</i> ),	23.	10 30 A.M.		Kater. Barrow.	0 53.9 0 48.9	
	„ „	23.	3 30 P.M.	0 47.2	Alt. and Az. Kater. Barrow.	1 8.5 0 11.2 0 15.2	
	„ ( <i>Rupert rock</i> ),	21.	4 30 „		Alt. and Az.	0 27.1	
	„ ( <i>area--Sabot I.</i> ),				Kater. Barrow.	EAST. 0 13.1 0 11.1	
	„ ( <i>plain in Carreen hill</i> )				Kater. Barrow.	WEST. 0 22.4 0 22.4	
	„ ( <i>small island, close to Sabot island</i> )				Kater. Barrow.	0 15.6 0 25.6	

with References for Fixing the Observation Spots.

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
	H. M.		NORTH.	NORTH.		H. M.				
1872.					1872.					
Nov. 6.	1 0 P.M.	1	67° 52' 0	° ' "	Oct. 30.	1 45 P.M.	<i>a</i>	3·866		
	3 0 "	2	67 52·0		31.	0 30 "	<i>a</i>	3·872		
				67 52·0	31.	2 30 "	<i>a</i>	3·875	3·871	1.
1873.					1873.					
Jan. 6.	4 0 "	1	59 28·5	59 28·5	Jan. 7.	1 15 "	<i>a</i>	4·899	4·899	2.
22.	11 40 A.M.	2	56 28·9		22.	2 45 "	<i>a</i>	5·218	5·218	3a.
"	1 0 P.M.	1	56 26·3	56 27·6						
23.	10 30 A.M.	1	56 12·8		23.	3 30 "	<i>a</i>	5·218	5·218	3b.
"	11 45 "	2	56 13·0	56 13·0						
Feb. 4.	11 30 "	1	56 8·3		Feb. 4.	NOON.	<i>a</i>	4·876		
"	1 30 P.M.	2	56 20·0	56 14·1	"	2 30 P.M.	<i>D</i>	4·887	4·882	4a.
13.		1	55 15·4		8.	11 0 A.M.	<i>a</i>	5·431		
"		2	55 21·6	55 18·5	"	1 0 P.M.	<i>D</i>	5·435	5·433	5.
Mar. 17.	1 0 "	1	49 21·5							
18.	11 30 A.M.	2	49 3·4							
21.	1 0 P.M.	2	49 9·4							
"	2 30 "	1	49 5·0		Mar. 18.	3 5 "	<i>a</i>	6·662		
24.	0 30 "	1	49 10·1	49 9·8	21.	11 0 A.M.	<i>D</i>	6·663	6·663	6.

No for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	WEST.		WEST.	WEST.
	Bermuda ( <i>Tatem island</i> ), .	1873. June 5.	11 14 A.M.	5° 50' 3	Kater.	6° 2'	5° 56'
(a)	" ( <i>Cricket ground, Somerset island</i> ),	April 7. 8.	4 0 P.M. 3 30 "	4 58.1 5 20.3			5 9
(b)	" ( <i>Duckling stool, Mt. Longton</i> ),	June 3. 9.	1 45 " 11 30 A.M.	6 38.8 7 7.1	Kater.	7 2.8	6 59
	" .	April 12.		8 9.2			
(c)	" ( <i>Spanish point</i> ), .				Kater. Barrow. B. 172.	7 34.6 7 28.6 7 23.6	7 4?
(d)	" ( <i>Pedestal in garden, Mt. Longton</i> ),	9. 12.	1 38 P.M. 10 40 A.M.	8 48.4 8 59.7			8 54
(e)	" ( <i>Cemetery, Ireland island</i> ),	12.	3 0 P.M.		Kater.	5 58	5 58
(f)	" ( <i>Spur yard</i> ), .	June 2.	2 50 "	5 52	Kater.	6 16	6 4
(g)	" ( <i>Clarence cove</i> ), .	2.			Kater. Barrow. B. 172 A. B. 172 J.	10 7 10 3 10 3 10 10	9 57
	"	3.	NOON.	9 39.5			
7	" ( <i>Green outside dock-yard, Ireland I.</i> ),	April 14. June 11.	4 15 P.M. 4 0 "	7 31 6 43.8			7 10
	"				Kater. Barrow.	7 12 7 11.4	
	" ( <i>Cobbler's island</i> ),	11.			Kater. Barrow. B. 172 J.	8 15 8 15 7 54	8 8
	" ( <i>St George's, Button island</i> ),	April 12.	3 30 "		Kater. Barrow. Alt. Az.	7 2 7 12 7 33	7 15
	" ( <i>Orotopus island</i> ), .	14.	9 30 A.M.		Kater. Barrow. Alt. Az. B. 172 A. B. 172 J.	5 3 5 13 4 58 5 3 5 3	5 4

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
1873.	H. M.		NORTH.	NORTH.	1873.	H. M.				
June 5.	11 45 A.M.	1	67 28	67 28						
April 7.	11 0 „	2	65 44.3		April 8.	11 40 A.M.	"	5.065		
8.	10 30 „	1	65 43.6	65 44.2	„	4 45 P.M.	D	5.079	5.073	(a)
June 9.	1 0 P.M.	1	66 44.7	66 44.7	June 9.	1 0 „	"	4.789	4.789	(b)
April 17.		2	67 19.8	67 19.8	April 17.	11 0 A.M.	D	4.786	4.786	(c)
10.	10 0 A.M.	<i>For Circle Obserr.</i>	67 20	67 20	10.	2 45 P.M.	"	4.762		
9.	10 30 „	2	66 18.9		„	3 40 „	D	4.765	4.764	(d)
12.	0 15 P.M.	2	66 36.2	66 36.6						(e)
„		2	66 33.8	66 33.8						(f)
June 9.	2 50 „	<i>For Circle Obserr.</i>	66 44	66 44	June 9.	4 50 „	"	4.914	4.914	(g)
2.	10 0 A.M.	1	66 27.5		April 16.	11 0 A.M.	D	4.942		
10.	11 30 „	1	66 24.1	66 25.8	June 12.	11 45 „	"	4.901	4.922	7.

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	WEST.		WEST.	WEST.
	Bermuda ( <i>Barge island</i> ), . . .	1873. April 14.	4 30 P.M.		Kater. Barrow. Alt. and Az. B. 172 A. B. 172 J.	4 10' 4 8 4 23 4 8 4 14	4 13
	„ ( <i>Wreck hill</i> ), . . .	June 11.	9 30 A.M.		Kater. Barrow. B. 172 A. B. 172 J.	5 33 5 13 5 18 5 18	5 20
	„ ( <i>Bonz island</i> ), . . .				Kater.	5 11	5 11
8.	Halifax, . . . . .	May 13. 16.	9 45 „ 3 45 P.M.	21 33.6 21 40.2	Kater.	21 33	21 35
9.	Azores, . . . . .	July 9.	1 40 „	24 49			24 49
4 <i>b</i> .	Madeira, . . . . .				Kater.	20 33	20 33
10.	St Vincent ( <i>C. de Verde Is.</i> ), . . .	28.	5 30 „		Kater. Barrow. Alt. and Az. B. 172 A. B. 172 J.	17 4.3 17 1.3 17 4.3 17 31.2 17 21.3	
		31. Aug. 2.	4 30 „ 2 15 „	18 45.3 18 36.3	Kater.	18 35.0	
	„ ( <i>Sand hill</i> ), . . .	4.	5 30 „		Kater. Barrow.	18 31.6 18 56.6	18 40
11.	St Paul rocks, . . . . .	28.	3 0 „	16 22			16 22
12 <i>a</i> .	Bahia, . . . . .				Kater.	9 9	9 9
12 <i>b</i> .	„ ( <i>on beach</i> ), . . .	Sept. 23.	5 30 „		Kater. Kater. Barrow. B. 172 A. B. 172 J.	8 53 8 51 8 48 9 3 9 8	8 59
13.	Tristan d'Acunha, . . .	Oct. 15.	9 0 A.M.		Kater.	23 5	23 5

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
1873.	H. M.		NORTH.	NORTH.	1873.	H. M.				
May 16.	10 30 A.M.	1	74 48.2	74 48.2	May 13. 16.	2 30 P.M. 3 0 „	a D	3.386 3.384	3.385	8
July 9.	10 30 „	1	63 56.8	63 56.8	July 9.	4 0 „	a	4.690	4.690	9
17.	9 20 „	1	55 12.5	55 12.5	17.	10 0 A.M.	<i>For Circle Observ.</i>	5.240	5.240	4b.
28.	11 30 „	1	43 39		31.	2 0 P.M.	a	6.275		
29.	10 45 „	1	43 33.3		31.	0 15 „	D	6.276		
Aug. 2.	9 30 „	1	43 36	43 36.1	Aug. 1.	3 30 „	D	6.264	6.272	10
28.	11 15 „	1	22 32.5	22 32.5	28.	1 15 „	a	6.464	6.464	11
Sept. 16.	2 0 P.M.	1	4 6.6		Sept. 25.	9 30 A.M.	a	5.966	5.966	12a.
22.	4 0 „	1	3 59.8	4 2.5						12b.
23.	4 30 „	1	4 1.0							
Oct. 15.	10 0 A.M.	1	SOUTH. 40 39.8	SOUTH. 40 39.8						13

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	WEST.		WEST.	WEST.
	Nightingale island, . . .	1873. Oct. 17.	3 30 P.M.		Barrow.	23° 8'	23° 8'
14.	Cape of Good Hope, . . .	Nov. 13.	3 30 "		Kater. Kater. Barrow. Barrow. B. 172 A. B. 172 A. B. 172 J. B. 172 J.	29 57 30 6 30 12 30 14 29 52 29 56 30 2 30 16	
	" "	4.	11 20 A.M.	30 6.9			
	" "	"	0 30 P.M.	29 58.8			
	" "	"	3 40 "	29 56.2			
	" "	5.	8 10 A.M.	30 10.5			
	" "	14.	3 20 P.M.	30 4.2			30 4
	Marion island, . . .	Dec. 26.	4 30 "		Barrow.	33 44	33 44
15a.	Kerguelen I. ( <i>Christmas har.</i> )	1874. Jan. 7.	4 30 "		Kater. Barrow. Alt. and Az. B. 172 J.	33 38 33 23 33 32 33 38	33 32.8
15b.	" ( <i>Betsy cove</i> ), . . .	15.	5 50 "		Kater.	34 0	34 0
15c.	" ( <i>Hoore's Foreland</i> )	28.					
	" ( <i>Accessible bay</i> ), . . .	9.	3 30 "		Kater. Barrow. Alt. and Az.	33 22 33 27 33 52	33 33.7
	" ( <i>Hog island</i> ), . . .	19.	9 30 A.M.		Kater. Barrow.	35 59 35 49	35 54
				EAST.		EAST.	EAST.
16.	Melbourne, . . .	Mar. 24.			Kater. Kater. Kater. Kater. Barrow. Barrow. Barrow. B. 172 J. B. 172 J. B. 172 J.	8 22 8 20 8 29 8 26 8 35 8 39 8 36 8 45 8 44 8 41	8 35

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
1873.	H. M.		SOUTH.	SOUTH.	1873.	H. M.				
Nov. 3.	3 30 P.M.	2	55 56.5		Nov. 3.	NOON.	<i>a</i>	4.315		
"	0 30 "	1	55 53.0		"	1 15 P.M.	D	4.316		
4.	1 15 "	3	55 54.8		6.	11 0 A.M.	D	4.323		
"	3 30 "	1	55 57.2		7.	NOON.	<i>a</i>	4.316		
5.	7 50 A.M.	2	55 58.1		17.	2 0 P.M.	D	4.314		
6.	11 0 "	3	55 57.6	55 56.3	"	4 0 "	<i>a</i>	4.311	4.316	14.
1874.					1874.					
Jan. 7.	11 45 "	3	70 50	70 50	Jan. 7.	4 0 "	<i>a</i>	3.622	3.622	15a.
15.	5 45 P.M.	3	71 47.1	71 47.1	15.	5 0 "	<i>For Circle Observ.</i>	3.570	3.570	15b.
28.	5 0 "	3	72 0	72 0						15c.
Mar. 20.	NOON.	1	67 8.1		Mar. 24.	1 0 "	D	5.127		
"	2 0 P.M.	2	67 4.1		27.	11 0 A.M.	<i>a</i>	5.128		
"	4 0 "	3	67 5.2	67 5.77	27.	1 45 P.M.	D	5.125	5.127	16.

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination, adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	EAST.		EAST.	EAST.
17.	Sydney, . . . . .	1874. May 5.	10 0 A.M.	9° 33' 2"			
		7.	9 50 "	9 30.1			
		12.	10 0 "	9 32.6			
		"	11 13 "	9 32.0			
		18.	4 0 P.M.		Kater. Barrow. B. 172 A. B. 172 J.	9 32 9 27 9 22 9 22	9 27.9
18.	Wellington, . . . . .						
19.	Tongatabu, . . . . .	July 21.	10 0 A.M.	9 40.8	Kater. Barrow. Alt. and Az. B. 172 A. B. 172 J.	9 47 9 50 10 10 9 52 9 32	9 49
21.	Levuka, . . . . .	30.	10 30 "	9 16			9 16
20.	Kandavu, . . . . .	Aug. 5.	10 30 "	8 8.1	Kater. Kater. Barrow. Alt. and Az.	8 18 9 4 8 54 8 54	8 42.5
		July 27.	3 30 P.M.				
22.	Albany island ( <i>Cape York</i> ),	Sept. 3.	11 0 A.M.	4 29			
		7.	4 30 P.M.		Kater. Barrow. B. 172 J.	4 15 4 18 4 23	4 22
	" ( <i>Sertant rock</i> ), .	3.	3 30 "		Kater. Kater. Barrow. B. 172 J.	4 28 4 49 5 49 4 44	4 42

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
	H. M.		SOUTH.	SOUTH.		H. M.				
1874.										
April 15.	10 50 A.M.	1	62 43.2		May 18.	2 0 P.M.	"	5.771		
"	3 0 P.M.	2	62 44.9		June 1.	9 40 A.M.	"	5.773		
18.	2 30 "	3	62 48.2	62 45.4	May 18.	3 50 P.M.	D	5.770		
					June 1.	11 30 A.M.	D	5.767	5.770	17.
July 1.	11 45 A.M.	1	65 15.0							
"	2 45 P.M.	3	65 13.4							
2.	10 50 A.M.	2	65 14.1	65 14.2	July 6.	11 15 "	"	5.277	5.277	18.
20.	10 45 "	2	40 30.6							
"	1 45 P.M.	3	40 32.0	40 31.3	20.	3 20 P.M.	D	7.445	7.445	19.
31.	10 30 A.M.	2	36 42.1	36 42.1	31.	11 10 A.M.	D	7.583	7.583	21.
27.	0 50 P.M.	2	38 36.5	38 36.5	Aug. 6.	11 0 "	D	7.631	7.631	20.
Sept. 2.	1 30 "	2	32 28.7							
"	3 30 "	1	32 36.4							
3.	4 30 "	1	32 28.7		Sept. 3.	2 30 P.M.	D	8.030		
"	3 30 "	2	32 33.8	32 31.9	4.	3 30 "	D	8.034	8.032	22.

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	EAST.		EAST.	EAST.
23.	Dobbo ( <i>Aru islands</i> ), . . . . .	1874. Sept. 18.	7 15 A.M.	2° 37' 5"	Kater. Kater. Barrow. B. 172 J. Kater.	2° 33' 2° 33' 2° 33' 2° 23' 2° 39'	0° 4'
	, . . . . .	17.	4 30 P.M.				2° 33'
	Ki Doulan ( <i>Ki islands</i> ), . . . . .	25.	5 30 "		Kater. Barrow.	2° 27' 2° 27'	2° 27'
(a)	Banda island, . . . . .						
24.	Amboina, . . . . .	Oct. 8.	10 30 A.M.	2° 22' 4"			
	" . . . . .	"	7 30 "		Kater. Barrow. B. 172 A. B. 172 J.	1° 57' 1° 50' 2° 15' 2° 5'	2° 8' 6"
25.	Ternate, . . . . .						
26.	Samboangan, . . . . .	25.	7 0 "		Kater. Barrow. B. 172 A. B. 172 J.	1° 42' 2° 10' 1° 40' 1° 30'	1° 42'
27.	Ilo-Ilo, . . . . .	30.	5 0 P.M.		Kater.	1° 45'	1° 45'
28.	Manila, . . . . .	Nov. 7.	11 30 A.M.	0° 56'	Kater. Kater. Barrow. B. 172 A. B. 172 J.	0° 34' 0° 42' 0° 52' 0° 42' 0° 32'	0° 43'
		"	5 30 P.M.				
29.	Hong Kong, . . . . .	27.	3 30 "	0° 54' 5"			
		28.	10 40 A.M.	0° 56' 8"	Kater.	0° 51'	
	" . . . . .	Dec. 28.	5 30 P.M.		Kater. Barrow. B. 172 A. B. 172 J.	0° 49' 1° 14' 1° 9' 0° 44'	0° 57'

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
	H. M.		SOUTH.	SOUTH.		H. M.				
1874.					1874.					
Sept. 17.	8 0 A.M.	1	24 1.7							
18.	7 30 "	2	24 5.6	24 3.6	Sept. 18.	8 30 A.M.	D	8.218	8.218	23.
Oct. 2.	2 30 P.M.	<i>For Circle Obserr.</i>	22 10	22 10	Oct. 2.	3 0 P.M.	<i>For Circle Obserr.</i>	8.220	8.220	(a)
7.	4 40 "	2	20 16.1		8.	3 15 "	D	8.293		
8.	7 10 A.M.	1	20 16.8	20 16.4	"	2 0 "	a	8.288	8.290	24.
15.	9 30 "	1	10 48.6							
16.	6 15 "	2	10 44.9	10 46.7	15.	11 0 A.M.	<i>For Circle Obserr.</i>	8.261	8.261	25.
24.	5 0 P.M.	2	NORTH. 2 34.5	NORTH. 2 35.2	25.	8 0 "	D	8.231	8.231	26.
25.	7 15 A.M.	1	2 35.8							
30.	6 30 "	2	10 34.8	10 34.8	30.	7 0 "	<i>For Circle Obserr.</i>	8.012	8.012	27.
Nov. 7.	7 30 "	1	17 57.5							
"	8 50 "	2	17 59.9	17 58.7	Nov. 9.	9 20 "	D	8.060	8.060	28.
24.	10 0 "	1	32 20.1							
25.	NORTH.	2	32 19.8		28.	3 30 P.M.	D	7.765		
27.	3 40 P.M.	1	32 22.5		Dec. 8.	11 0 A.M.	a	7.772		
28.	3 0 "	2	32 19.3	32 20.4	30.	4 0 P.M.	a	7.761	7.767	29.

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.						Declination adopted.
		Declinometer.			Compasses.			
		Date.	Time.	Declination.	Name of Compass.	Declination.		
			H. M.	EAST.		EAST.	EAST.	
30.	Zebu, . . . . .	1875. Jan. 23.	7 30 A.M.	0 57.2		0 . .	0 . .	
		"	5 0 P.M.	0 49.9				
		19.	5 30 "		Kater.	1 8		
					Barrow.	1 0		
					B. 172 A.	0 50		
					B. 172 J.	0 55	0 58	
26.	Samboangan, . . . . .	29. Feb. 1.	2 30 "	1 35.5			1 40	
			3 10 "	1 33.6				
				EAST.		EAST.	EAST.	
31.	Admiralty islands, . . . .	Mar. 8.	11 0 A.M.	4 21.7	Kater.	4 38		
		9.	2 30 P.M.		Kater.	4 39		
					Barrow.	4 42	4 37	
32.	Yokohama ( <i>Japan</i> ), . . . .	April 23.	10 17 A.M.	WEST. 3 47.4		WEST.	WEST.	
		May 4.	0 50 P.M.	4 1.1	Kater.	4 9		
	"	8.	3 30 "		Kater.	3 56		
					Barrow.	3 51		
					B. 172 A.	4 4		
					B. 172 J.	4 1	3 56	
33.	Kobé, . . . . .	18.	9 50 A.M.	4 19.5			4 19	
34.	Miura Bay, . . . . .							
35.	Honolulu ( <i>Sandwich Is.</i> ), . .	July 29.	5 30 P.M.	EAST. 9 52.5		EAST.	EAST.	
		30.	4 30 "	9 31.1	Kater.	9 38		
		Aug. 10.	2 0 "	9 37.6	Kater.	9 41		
		4.	5 0 "		Kater.	9 35		
					Barrow.	9 37		
					B. 172 A.	9 30		
					B. 172 J.	9 23	9 34.1	
	Hilo ( <i>Crater</i> ), " . . . .	16.	4 0 "		Prismatic.	9 5	9 5	
	" " . . . . .	"						
36.	" ( <i>Cocoanut island</i> ), " . .	Aug. 18.	4 0 "	7 34	Kater.	7 24	7 29	

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Observ- ation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
			NORTH.	NORTH.						
1875.	H. M.				1875.	H. M.				
Jan. 20.	7 0 A.M.	1	9 17.1		Jan. 20.	5 30 P.M.	a	8.083	8.083	30.
21.	7 0 „	1	9 17.8	9 17.6						
29.	11 30 „	1	2 31.1		29.	0 15 „	a	8.228		
„	1 45 P.M.	4	2 31.0		Feb. 5.	11 50 A.M.	b	8.250	8.239	26.
Feb. 1.	Noon.	2	2 30.4	2 30.8						
			SOUTH.	SOUTH.						
Mar. 5.	2 50 P.M.	1	15 42.4		Mar. 8.	2 15 P.M.	a	8.078	8.078	31.
6.	10 50 A.M.	2	15 33.3							
8.	11 30 „	1	15 48.2	15 41.3						
			NORTH.	NORTH.						
April 20.	10 30 „	1	48 50.1		May 1.	11 45 A.M.	b	6.390		
22.	0 30 P.M.	2	48 45.3		10.	1 0 P.M.	a	6.385	6.387	32.
„	3 10 „	3	48 57.0							
May 4.	2 0 „	4	48 42.3	48 48.7						
19.	11 0 A.M.	1	48 38.5	48 38.5	18.	11 30 A.M.	b	6.548	6.548	33.
27.	0 45 P.M.	1	48 28.3	48 28.3						34.
July 30.	Noon.	4	39 56.6		July 31.	3 0 P.M.	a	6.528		
31.	10 30 A.M.	1	39 56.8	39 56.7	„	4 0 „	b	6.521	6.526	35.
Aug. 16.	2 0 P.M.	For Circle Obserr.	38 17	38 17	Aug. 16.	2 30 „	For Circle Obserr.	6.755	6.755	
„	3 0 „	For Circle Obserr.	35 27	35 27	„	3 30 „	Obserr.	6.768	6.768	
Aug. 17.	3 15 „	1	38 39.2	38 39.2	19.	9 45 A.M.	a	6.792	6.792	36.

No. for reference to Obser- vation. Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	EAST.		EAST.	EAST.
37.	Tahiti, . . . . .	1873. Sept. 23.	10 0 A.M.	8° 4'6"			
		"	10 50 "	8 5'8"	Kater.	8 0	8 2'5"
		29.	7 30 "		Kater.	7 40	
					Barrow. B. 172 A. B. 172 J.	7 45 7 35 7 20	7 35
38.	Juan Fernandez, . . . . .						
39.	Valparaiso, . . . . .	Dec. 7.	7 0 "	15 36.5	Kater.	15 39	
		4.	5 30 P.M.		Kater.	15 26	
					Barrow.	15 21	
					B. 172 A. B. 172 J.	15 1 15 21	15 27.3
40a.	Port Otway ( <i>Chilé</i> ), . . . . .						
	Middle island, ,, . . . . .	1876. Jan. 2.	1 30 "		Kater.	21 8	21 8
40b.	Gray harbour, ,, . . . . .	3.	8 15 A.M.	21 43.5			
		"	7 30 "		Kater.	21 42	
					Barrow.	21 42	21 43
		6.	7 30 "		Barrow.	20 52	20 52
	Puerto Bueno, ,, . . . . .						
	Isthmus bay, ,, . . . . .						
	Port Churraca, ,, . . . . .						
41.	Sandy Point, ,, . . . . .	17.	10 30 "	20 58			20 58
		16.	6 30 P.M.		Kater. Barrow. B. 172 A. B. 172 J.	21 26 21 26 21 6 21 16	21 18.5

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.	
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.		
	H. M.		SOUTH.	SOUTH.		H. M.					
1875. Sept. 22.	9 15 A.M.	1	30 1.9		1875. Sept. 21.	2 45 P.M.	D	7.231		37.	
"	2 45 P.M.	1	30 4.7	33 3.3	" 21.	3 45 "	a	7.231	7.234		
Nov. 15.	6 15 A.M.	1	39 39.7	39 39.7	Nov. 15.	3 0 "	D	6.265	6.265	38.	
29.	0 30 P.M.	1	33 47.2		Dec. 3.	2 45 "	a	6.152		39.	
"	2 30 "	4	33 47.0			"	3 50 "	D	6.148		6.150
"	3 45 "	3	33 17.7	33 47.3							
Dec. 31.	9 0 "	<i>For Circle Obserr.</i>	48 52	48 52	31.	7 30 "	<i>For Circle Obserr.</i>	6.179	6.179	40a.	
1876. Jan. 2.	NOON.	1	50 41.8	50 41.8	1876.						
3.	6 10 A.M.	1	50 15.6	50 15.6	Jan. 3.	11 40 A.M.	a	6.196		40b.	
					4.	6 0 "	a	6.192	6.194		
9.	7 0 P.M.	<i>For Circle Obserr.</i>	51 49	51 49	9.	7 30 P.M.	<i>For Circle Obserr.</i>	6.183	6.183	41.	
10.	7 0 "	<i>For Circle Obserr.</i>	53 5	53 5	10.	7 30 "	<i>For Circle Obserr.</i>	5.997	5.997		
12.	4 0 "	<i>For Circle Obserr.</i>	54 49	54 49	12.	4 30 "	<i>For Circle Obserr.</i>	6.070	6.070	41.	
14.	4 0 "	1	53 1.9		17.	NOON.	a	6.072	6.072		
17.	11 30 A.M.	4	53 5.6	53 3.7							

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.					
		Declinometer.			Compasses.		Declination adopted.
		Date.	Time.	Declination.	Name of Compass.	Declination.	
			H. M.	EAST.		EAST.	EAST.
42.	Falkland islands ( <i>Stanley</i> ),	1876. Jan. 26.	6 15 A.M.	14 21	Kater.	14 38	0
		27.	5 30 P.M.	14 8			
		28.	7 30 A.M.		Kater.	14 14	
					Barrow. B. 172 A. B. 172 J.	14 24 13 59 13 39	
43.	„ ( <i>Port Louis</i> ),	Feb. 1.	4 20 P.M.	14 25.6	Kater.	14 37	14 11
		3.	1 0 „	14 26.8			
		1.	5 30 „		Kater.	14 37	
					Barrow. B. 172 A. B. 172 J.	14 27 14 7 14 17	
44.	Monte Video,	21.	3 45 „	8 34	Kater.	8 50	8 22
		„	4 30 „		Kater.	8 37	
					Barrow. B. 172 A. B. 172 J.	8 42 8 27 8 12	
45a.	Ascension ( <i>George Town</i> ),	April 1.	5 0 „	WEST. 23 10.2		WEST.	WEST.
		2.	6 30 A.M.	23 1.0			
		Mar. 28.	5 30 P.M.		Kater.	22 46	23 6
					Barrow. B. 172 A. B. 172 J.	23 6 23 36 23 31	
45b.	„ ( <i>Green mountain</i> ),	31.	9 0 A.M.	22 32			22 32
46.	St Jago ( <i>Cl. de Verde Is.</i> ),						
47.	St Vincent ( <i>Cl. de Verde Is.</i> ),	April 22.	3 40 P.M.	18 52.4			18 52
		24.	10 0 A.M.	18 48.8			
		21.	5 30 P.M.		Kater. Barrow. B. 172 J.	18 46 18 41 19 26	

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet.	Horizontal Force.	Horizontal Force adopted.	
	H. M.		SOUTH.	SOUTH.		H. M.				
1876.					1876.					
Jan. 24.	1 0 P.M.	1	48 4							
"	3 0 "	4	48 19							
"	5 0 "	3	48 15.5		Jan. 26.	6 15 A.M.	a	6.020		
25.	10 0 A.M.	2	48 4	48 4.6	27.	3 15 P.M.	D	6.027	6.024	42.
Feb. 1.	4 50 P.M.	1	48 1.2		Feb. 1.	5 40 "	a	6.028		
2.	4 15 "	4	47 59.1	48 0.1	3.	10 40 A.M.	D	6.031	6.030	43.
21.	0 15 P.M.	1	29 46.4		21.	11 35 "	a	5.814		
22.	1 40 "	3	30 5.5		"	0 50 P.M.	D	5.812	5.813	44.
"	4 30 "	4	29 43.1	29 48.9						
Mar. 29.	10 30 A.M.	1	8 0.2		Mar. 29.	3 0 P.M.	a	6.073		
29.	0 30 P.M.	4	7 51.7		"	4 15 "	D	6.075	6.074	45a.
April 2.	5 0 "	2	7 54.2	7 56.1						
Mar. 30.	1 30 "	1	9 57.1		30.	5 40 "	D	6.124		
"	3 0 "	4	9 57.4	9 57.2	30.	8 0 A.M.	D	6.121	6.123	45b.
April 17.	3 0 "	1	NORTH. 39 34.8	NORTH. 39 44.8						
21.	11 30 A.M.	1	43 2.8		April 22.	11 10 "	a	6.260		
"	2 0 P.M.	2	43 7.6		"	0 15 P.M.	D	6.262		
"	3 50 "	3	43 9.9		24.	0 10 "	a	6.263	6.262	47.
22.	4 30 "	4	43 7.5	43 6.5						

## THE VOYAGE OF H.M.S. CHALLENGER.

No. for reference to Obser- vation Spot.	STATION.	DECLINATION OR VARIATION OF COMPASS.				
		Declinometer.			Compasses.	
		Date.	Time.	Declination.	Name of Compass.	Declination adopted.
			H. M.	WEST.		WEST.
48.	Sheerness, . . . . .	1876.		0 4		0 4
49.	Kew Observatory, . . . .	July 14. 25.	3 15 P.M. 0 50 P.M.	19 30.5 19 29.3		19 30

INCLINATION OR DIP.					ABSOLUTE HORIZONTAL FORCE.					No. for reference to Obser- vation Spot.
Date.	Time.	Needle.	Inclination.	Inclination adopted.	Date.	Time.	Magnet	Horizontal Force.	Horizontal Force adopted.	
1876.	H. M.		NORTH.	NORTH.	1876.	H. M.				
June 1.	10 40 A.M.	4	67 32.7	67 32.7	June 1.	NOON.	<i>For Circle Observ.</i>	3.922	3.922	48.
July 3.	11 15 "	1	67 46.2		July 7.	"	<i>a</i>	3.898		
"	3 0 P.M.	2	67 47.9		"	1 0 P.M.	<i>b</i>	3.892		
"	1 45 "	3	67 47.8		"	"	<i>a</i>	3.894		
"	11 30 A.M.	4	67 47.4		14.	11 20 A.M.	<i>a</i>	3.894		
"	3 15 P.M.	1	67 45.4	67 45.0	"	0 35 P.M.	<i>b</i>	3.895	3.895	49.

V.—ABSTRACT of VARIATIONS OBSERVED at SEA during the  
Voyage of H.M.S. Challenger, 1872-76.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1872.	NORTH.	WEST.	WEST.			WEST.	
Dec. 22.	49° 51'	4° 21'	28° 21'	w.	-6° 30'	21° 51'	Pitching and rolling heavily.
"	49 26	5 10	26 44	w. $\frac{1}{2}$ s.	-6 20	20 24	
26.	48 23	8 55	25 13	s.w. $\frac{1}{2}$ s.	-2 53	22 20	Great motion.
29.	44 19	10 52	25 0	s.s.w.	-1 48	23 12	"
"	43 51	10 39	22 22	s. $\frac{1}{2}$ E.	+0 35	22 57	
31.	41 55	9 48	24 10	s.w. $\frac{1}{2}$ s.	-2 50	21 20	
"	41 35	9 55	23 1	s.s.w. $\frac{1}{2}$ w.	-2 15	20 46	
1873.							
Jan. 1.	40 26	9 42	26 18	w.N.w.	-5 54	20 24	
13.	38 10	9 11	20 49	s.	+0 18	21 7	
"	38 5	9 40	14 20	E. $\frac{1}{2}$ s. $\frac{1}{2}$ s.	+5 30	19 50	
15.	37 2	9 23	16 10	E.	+5 54	22 4	
"	36 59	9 13	24 43	w.	-5 54	18 49	
16.	36 28	8 19	14 54	E.	+5 50	20 44	
"	36 25	8 12	17 52	s.s.e. $\frac{1}{2}$ E.	+2 36	20 28	20 50
"	36 25	8 12	24 0	w.s.w.	-2 42	21 18	
"	35 42	6 15	23 25	N.w. $\frac{1}{2}$ w.	-4 40	18 45	19 15
"	35 18	6 30	20 9	N. $\frac{1}{2}$ w.	-0 24	19 45	
27.	35 42	6 15	23 10	w.s.w.	-4 5	19 5	
"	35 18	6 30	22 30	N.	-0 15	22 15	
28.	35 45	8 10	24 52	N.w. $\frac{1}{2}$ w.	-4 10	20 42	Great motion.
"	35 47	8 19	17 8	s.e.	+2 55	20 3	19 55
"	35 47	8 19	15 26	E. $\frac{1}{2}$ s.	+4 20	19 46	
29.	36 13	10 7	26 7	w.	-4 30	21 37	21 25
30.	36 23	11 18	25 44	w.	-4 30	21 14	Great motion.
"	36 23	11 18	25 41	w.	-4 30	21 11	
"	36 23	11 18	26 48	w. $\frac{1}{2}$ s.	-4 15	22 33	
31.	35 20	13 0	27 7	w. $\frac{1}{2}$ s.	-4 15	22 52	21 58
"	35 20	13 0	17 1	E.	+4 30	21 31	
"	35 20	13 0	16 55	E.N.E.	+4 0	20 55	
Feb. 1.	34 3	14 19	27 33	w.s.w.	-3 48	23 45	23 47
"	34 3	14 19	27 38	w.s.w.	-3 48	23 50	
"	33 43	14 41	23 2	w. $\frac{1}{2}$ s. $\frac{1}{2}$ s.	-4 0	19 2	18 40
"	33 43	14 41	22 28	w. $\frac{1}{2}$ s.	-4 10	18 18	
2.	32 43	15 52	25 58	w.N.w.	-4 24	21 34	
4.	32 38	16 54	17 48	s.e.	+2 45	20 33	
5.	32 25	16 45	22 24	s.w. $\frac{1}{2}$ w.	-0 50	21 34	
6.	30 25	17 4	20 54	s. $\frac{1}{2}$ E.	+0 54	21 48	
"	29 19	16 38	19 43	s.e.	+2 40	22 23	
11.	28 42	17 8	24 33	w.N.w.	-4 18	20 15	
"	27 59	17 40	24 40	w.N.w.	-4 18	20 22	
12.	27 59	17 0	11 27	E.s.e.	+3 36	18 3	
15.	27 20	16 58	17 57	s.e. $\frac{1}{2}$ s.	+2 10	20 7	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	NORTH.	WEST.	WEST.			WEST.	
Feb. 16.	26 50	17 32	$\left\{ \begin{array}{l} 23^{\circ} 13' \\ 23 \quad 4 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.S.W.} \\ \text{W.S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3^{\circ} 10' \\ -3 \quad 10 \end{array} \right.$	$\left\{ \begin{array}{l} 20^{\circ} 3' \\ 19 \quad 58 \end{array} \right.$	
"	26 31	18 20	$\left\{ \begin{array}{l} 24 \quad 32 \\ 18 \quad 45 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{S.E.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 50 \\ +2 \quad 22 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 42 \\ 21 \quad 7 \end{array} \right.$	
17.	25 52	19 22	$\left\{ \begin{array}{l} 17 \quad 24 \\ 17 \quad 34 \\ 21 \quad 36 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.} \\ \text{N.E.}^{\text{b}}\text{E.} \\ \text{S.}^{\text{b}}\text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} +3 \quad 0 \\ +3 \quad 25 \\ -0 \quad 28 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 24 \\ 20 \quad 59 \\ 21 \quad 8 \end{array} \right.$	20 54
18.	25 45	20 14	$\left\{ \begin{array}{l} 23 \quad 7 \\ 22 \quad 40 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.N.W.}^{\frac{1}{2}}\text{W.} \\ \text{S.N.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -2 \quad 36 \\ -2 \quad 18 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 31 \\ 20 \quad 22 \end{array} \right.$	20 26
19.	25 28	20 22	$\left\{ \begin{array}{l} 21 \quad 47 \\ 22 \quad 24 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.W.} \\ \text{S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -1 \quad 50 \\ -1 \quad 50 \end{array} \right.$	$\left\{ \begin{array}{l} 19 \quad 57 \\ 20 \quad 34 \end{array} \right.$	20 16
20.	24 59	21 22	$\left\{ \begin{array}{l} 24 \quad 17 \\ 24 \quad 28 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.}^{\text{b}}\text{N.} \\ \text{W.}^{\text{b}}\text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 45 \\ -3 \quad 45 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 32 \\ 20 \quad 43 \end{array} \right.$	20 31
21.	24 26	23 51	$\left\{ \begin{array}{l} 24 \quad 5 \\ 17 \quad 12 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.}^{\text{b}}\text{N.} \\ \text{E.}^{\text{b}}\text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 45 \\ +3 \quad 30 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 20 \\ 20 \quad 42 \end{array} \right.$	
"	24 20	24 28	$\left\{ \begin{array}{l} 23 \quad 10 \\ 23 \quad 0 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.}^{\text{b}}\text{N.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 48 \\ -3 \quad 40 \end{array} \right.$	$\left\{ \begin{array}{l} 19 \quad 22 \\ 19 \quad 20 \end{array} \right.$	
22.	23 29	27 28	$\left\{ \begin{array}{l} 17 \quad 8 \\ 15 \quad 25 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.} \\ \text{E.}^{\text{b}}\text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 \quad 56 \\ +3 \quad 42 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 4 \\ 19 \quad 7 \end{array} \right.$	19 35
"	23 14	28 22	$\left\{ \begin{array}{l} 15 \quad 25 \\ 19 \quad 43 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.}^{\text{b}}\text{N.} \\ \text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} +3 \quad 42 \\ -0 \quad 15 \end{array} \right.$	$\left\{ \begin{array}{l} 19 \quad 7 \\ 19 \quad 28 \end{array} \right.$	
24.	23 23	31 31	$\left\{ \begin{array}{l} 16 \quad 5 \\ 20 \quad 43 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.E.}^{\text{b}}\text{E.} \\ \text{N.W.}^{\text{b}}\text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 \quad 42 \\ -3 \quad 30 \end{array} \right.$	$\left\{ \begin{array}{l} 18 \quad 47 \\ 17 \quad 13 \end{array} \right.$	17 34
25.	23 12	32 55	$\left\{ \begin{array}{l} 17 \quad 12 \\ 20 \quad 33 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.}^{\text{b}}\text{E.} \\ \text{W.N.W.} \end{array} \right.$	$\left\{ \begin{array}{l} +0 \quad 42 \\ -3 \quad 42 \end{array} \right.$	$\left\{ \begin{array}{l} 17 \quad 54 \\ 16 \quad 51 \end{array} \right.$	16 47
26.	23 22	35 6	$\left\{ \begin{array}{l} 20 \quad 33 \\ 20 \quad 26 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.N.W.} \\ \text{W.N.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 42 \\ -3 \quad 40 \end{array} \right.$	$\left\{ \begin{array}{l} 16 \quad 44 \\ 17 \quad 15 \end{array} \right.$	
27.	23 28	36 25	$\left\{ \begin{array}{l} 20 \quad 55 \\ 18 \quad 21 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.N.W.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 40 \\ -3 \quad 30 \end{array} \right.$	$\left\{ \begin{array}{l} 16 \quad 44 \\ 14 \quad 51 \end{array} \right.$	
28.	23 10	38 42	$\left\{ \begin{array}{l} 18 \quad 21 \\ 18 \quad 36 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 30 \\ -3 \quad 30 \end{array} \right.$	$\left\{ \begin{array}{l} 14 \quad 51 \\ 15 \quad 6 \end{array} \right.$	
"	23 6	39 9	$\left\{ \begin{array}{l} 14 \quad 55 \\ 11 \quad 54 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.} \\ \text{E.S.E.} \end{array} \right.$	$\left\{ \begin{array}{l} +0 \quad 12 \\ +3 \quad 5 \end{array} \right.$	$\left\{ \begin{array}{l} 15 \quad 7 \\ 14 \quad 59 \end{array} \right.$	
Mar. 1.	22 45	40 37	$\left\{ \begin{array}{l} 16 \quad 39 \\ 14 \quad 54 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.W.} \\ \text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} -2 \quad 0 \\ +0 \quad 12 \end{array} \right.$	$\left\{ \begin{array}{l} 14 \quad 39 \\ 15 \quad 7 \end{array} \right.$	14 56
"	22 32	41 53	$\left\{ \begin{array}{l} 14 \quad 25 \\ 18 \quad 19 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} +0 \quad 12 \\ -3 \quad 30 \end{array} \right.$	$\left\{ \begin{array}{l} 14 \quad 37 \\ 14 \quad 49 \end{array} \right.$	14 25
2.	22 32	41 53	$\left\{ \begin{array}{l} 17 \quad 34 \\ 9 \quad 12 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.}^{\text{b}}\text{N.} \\ \text{E.}^{\text{b}}\text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 35 \\ +3 \quad 18 \end{array} \right.$	$\left\{ \begin{array}{l} 13 \quad 59 \\ 12 \quad 30 \end{array} \right.$	
3.	21 57	43 29	Mean of 7 principal points			12 38	
4.	21 38	44 39	$\left\{ \begin{array}{l} 12 \quad 57 \\ 9 \quad 20 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.}^{\text{b}}\text{S.} \\ \text{S.S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} +3 \quad 18 \\ -0 \quad 48 \end{array} \right.$	$\left\{ \begin{array}{l} 12 \quad 30 \\ 12 \quad 9 \end{array} \right.$	12 20
"	21 2	46 22	$\left\{ \begin{array}{l} 14 \quad 39 \\ 15 \quad 0 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.S.E.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} +3 \quad 0 \\ -3 \quad 24 \end{array} \right.$	$\left\{ \begin{array}{l} 12 \quad 20 \\ 11 \quad 15 \end{array} \right.$	
5.	21 2	46 22	$\left\{ \begin{array}{l} 12 \quad 47 \\ 10 \quad 7 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{S.W.}^{\text{b}}\text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 24 \\ -1 \quad 27 \end{array} \right.$	$\left\{ \begin{array}{l} 11 \quad 36 \\ 11 \quad 20 \end{array} \right.$	11 24
6.	20 49	48 45	$\left\{ \begin{array}{l} 11 \quad 59 \\ 8 \quad 12 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.N.W.} \\ \text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} -1 \quad 48 \\ -3 \quad 24 \end{array} \right.$	$\left\{ \begin{array}{l} 8 \quad 19 \\ 8 \quad 35 \end{array} \right.$	
7.	20 41	50 29	$\left\{ \begin{array}{l} 7 \quad 33 \\ 11 \quad 54 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.}^{\text{b}}\text{E.} \\ \text{S.}^{\text{b}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +0 \quad 27 \\ +0 \quad 27 \end{array} \right.$	$\left\{ \begin{array}{l} 8 \quad 39 \\ 8 \quad 0 \end{array} \right.$	8 25
8.	20 12	51 50	$\left\{ \begin{array}{l} 5 \quad 33 \\ 9 \quad 40 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{N.N.E.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 22 \\ +1 \quad 24 \end{array} \right.$	$\left\{ \begin{array}{l} 8 \quad 32 \\ 6 \quad 57 \end{array} \right.$	
"	20 7	52 32	$\left\{ \begin{array}{l} 8 \quad 16 \\ 7 \quad 38 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{W.S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 20 \\ -2 \quad 48 \end{array} \right.$	$\left\{ \begin{array}{l} 6 \quad 20 \\ 4 \quad 50 \end{array} \right.$	
9.	19 59	53 28	$\left\{ \begin{array}{l} 3 \quad 42 \\ 8 \quad 16 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 20 \\ +0 \quad 10 \end{array} \right.$	$\left\{ \begin{array}{l} 4 \quad 56 \\ 3 \quad 52 \end{array} \right.$	4 33
10.	19 43	55 9	$\left\{ \begin{array}{l} 8 \quad 16 \\ 7 \quad 38 \end{array} \right.$	$\left\{ \begin{array}{l} \text{W.} \\ \text{W.S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 20 \\ -2 \quad 48 \end{array} \right.$	$\left\{ \begin{array}{l} 4 \quad 56 \\ 4 \quad 50 \end{array} \right.$	

Uneasy motion.

"

Rolling and pitching heavily.

Rolling heavily.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation, or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	NORTH.	WEST.	WEST.			WEST.	
Mar. 10.	19 41	55 19	{ 0 45 6 2	E. N.W. <sup>b</sup> N.	+3 20 -2 24	{ 4 5' 3 38	Result of swinging on 32 points.
11.	19 24	56 40	{ 6 57 6 29	W. <sup>1</sup> / <sub>2</sub> S. W. <sup>1</sup> / <sub>2</sub> S.	-3 15 -3 15	{ 3 42 3 14	
"	19 22	57 4	{ 1 8 7 36	E. <sup>1</sup> / <sub>2</sub> S. W. <sup>1</sup> / <sub>2</sub> S.	+3 10 -3 12	{ 4 18 4 24	
"	19 15	57 50	{ 4 35 3 13	W. W. <sup>b</sup> S. <sup>1</sup> / <sub>2</sub> S.	-3 15 -2 54	{ 1 20 0 19	
13.	18 54	61 24	{ 0 34 1 41	S. S.E. <sup>b</sup> E.	-0 8 +2 24	{ 0 26 0 43	
14.	18 41	62 48	{ EAST. 1 41			{ EAST. 0 5	
"	18 40	63 1				{ WEST. 0 36	
23.	18 17	65 0	...	...	...	{ 0 25	
25.	18 38	65 8	{ 0 28 0 11	S.S.E. N. <sup>b</sup> E.	+1 4 +0 36	{ 0 36 0 25	
26.	19 40	65 8	{ WEST. 0 58	S. <sup>b</sup> E.	+0 40	{ 1 38	
			{ EAST. 2 59	N.E.	+2 30	{ EAST. 0 29	
			{ 1 21	S.E.	+2 5	{ WEST. 0 44	
27.	20 50	65 16	{ WEST. 0 14	N. <sup>1</sup> / <sub>2</sub> E.	+0 15	{ WEST. 0 29	
"	21 26	65 16	{ 0 48 1 22	S. N.	+0 12 -0 12	{ 1 0 1 10	
28.	22 47	65 19	{ 2 40 3 40	N. <sup>1</sup> / <sub>2</sub> W. N.N.W. <sup>1</sup> / <sub>2</sub> W.	-0 30 -2 5	{ 2 10 1 35	
"	23 1	65 20	{ 0 38 1 24	N. <sup>1</sup> / <sub>2</sub> E. N. <sup>1</sup> / <sub>2</sub> E.	+0 20 +0 20	{ 0 58 1 41	
29.	24 39	65 28	{ 0 0 2 33	S.E. <sup>b</sup> S. N. <sup>1</sup> / <sub>2</sub> E.	+1 45 +0 30	{ 1 45 3 3	
30.	26 5	65 20	{ 2 11 2 2	N. <sup>b</sup> E. N. <sup>b</sup> E.	+0 40 +0 40	{ 2 51 2 42	
"	26 50	65 5	{ 2 24 4 29	N. <sup>b</sup> E. S.	+0 40 +0 12	{ 3 4 4 41	
31.	27 49	65 1	{ 3 41 5 8	S. <sup>1</sup> / <sub>2</sub> E. N.	+0 30 -0 12	{ 4 11 4 56	
April 1.	29 6	65 1	{ 5 16 4 27	N. N.	-0 12 -0 12	{ 5 4 4 15	
2.	29 42	65 7	{ 4 58 1 50	N. N.E.	-0 12 +3 0	{ 4 46 4 50	
"	29 56	65 8	{ 3 37 4 55	N. <sup>b</sup> E. N. <sup>b</sup> E.	+0 35 +0 35	{ 4 12 5 30	
3.	31 26	65 0	{ 6 3	N.	-0 12	{ 5 51	
5.	32 19	64 15	{ 9 38 8 39	N. S. <sup>b</sup> W.	-0 12 -0 35	{ 9 26 8 4	At anchor—Bermuda.
22.	32 36	65 8	{ 8 55 7 39	N. <sup>b</sup> W. <sup>1</sup> / <sub>4</sub> W. S.S.W.	-1 36 -1 24	{ 7 19 6 15	
24.	32 18	65 38	{ 11 15 3 9	N.W. <sup>1</sup> / <sub>4</sub> N. N.E.	-4 0 +4 10	{ 7 15 7 19	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation		
1873.	NORTH.	WEST.	WEST.			WEST.	
April 25.	32 48	66 20	{ 10 21 10 3	N.W. N.W. $\frac{1}{2}$ N.	-4 30 -4 10	{ 5 51 5 53	{ 5 52
27.	34 11	67 26	{ 10 37 9 54	S.W. S.W. $\frac{1}{2}$ W.	-3 15 -4 10	{ 7 22 5 44	{ 6 33
28.	34 48	68 26	{ 10 22 11 9	N.W. $\frac{1}{2}$ N. N.W. $\frac{1}{2}$ N.	-3 40 -3 40	{ 6 42 7 29	{ 7 5
30.	35 58	70 35	{ 13 2 8 32	W.N.W. N.N.W. $\frac{1}{2}$ W.	-5 40 -3 15	{ 7 22 5 17	
May 1.	36 21	72 0	{ 9 40 10 3	N.W. $\frac{1}{2}$ W. N.W. $\frac{1}{2}$ W.	-5 5 -5 5	{ 4 35 4 58	{ 4 57
4.	39 20	70 53	{ 1 31 4 16	E.N. $\frac{1}{2}$ N. N.E.	+5 55 +4 50	{ 7 26 9 6	{ Pitching and rolling heavily.
5.	39 38	69 27	{ 4 42 5 48	N.E. E.N.	+4 50 +6 5	{ 9 32 11 53	{ 9 38
6.	40 12	68 0	{ 7 45 6 46	S.E. $\frac{1}{2}$ S. N.E.	+3 0 +4 25	{ 10 45 11 11	{ 10 58
7.	41 13	65 50	{ 9 9 8 53	N.E. N.E.	+4 25 +4 25	{ 13 34 13 18	
8.	41 36	65 25	{ 10 5 14 54	N.E. S.E. $\frac{1}{2}$ E.	+4 25 +3 5	{ 14 30 17 59	
9.	42 4	64 54	{ 12 19 11 30	E.S.E. E.S.	+5 40 +6 0	{ 17 59 17 30	
10.	43 2	63 58	{ 12 15 11 30	E. E.N.	+6 15 +6 30	{ 18 30 18 0	{ 18 23
11.	43 7	63 39	{ 12 45 13 30	E.N.E. N.E. $\frac{1}{2}$ E.	+6 10 +5 35	{ 18 55 19 25	
12.	43 7	63 39	{ 14 15 13 55	N.E. N.E. $\frac{1}{2}$ N.	+4 50 +4 10	{ 19 5 18 5	
13.	43 7	63 39	{ 21 49 18 52	S.W. $\frac{1}{2}$ W. S.W. $\frac{1}{2}$ W.	-1 55 -1 35	{ 19 54 17 17	
14.	42 53	63 39	...	...	...	18 15	Result of swinging on 15 points.
15.	42 9	63 37	{ 17 7 15 19	N.E. S. $\frac{1}{2}$ E.	+1 12 +0 48	{ 18 19 16 7	{ 17 48
16.	41 22	63 13	{ 16 9 16 45	S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ W.	+0 48 -0 48	{ 16 57 15 57	{ 16 20
17.	36 30	63 40	{ 16 53 15 33	W.N. N.W. $\frac{1}{2}$ N.	-6 55 -4 20	{ 9 58 11 13	{ 11 4
18.	35 9	63 57	{ 12 35 8 9	N.W. S.E. $\frac{1}{2}$ S.	-1 34 +3 55	{ 11 1 12 4	
19.	34 51	63 58	{ 8 9 12 3	S.E. $\frac{1}{2}$ S. S.S.W. $\frac{1}{2}$ W.	+3 55 -2 0	{ 12 4 10 3	
20.	33 23	64 33	{ 13 19 9 33	N.N.W. $\frac{1}{2}$ W. S.S.W. $\frac{1}{2}$ W.	-3 50 -1 50	{ 9 29 7 43	{ 7 36
21.	32 54	61 39	{ 10 29 8 5	S.W. S.W. $\frac{1}{2}$ W.	-3 0 -1 0	{ 7 29 7 5	
22.	32 4	64 45	...	...	...	7 13	Result of swinging on 22 points.
June 14.	32 54	63 22	9 44	S.S.W.	-1 25	8 19	
15.	33 33	61 54	6 30	N.E.	+3 45	10 15	
16.	33 52	61 17	5 11	E.N.	+5 3	10 14	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	NORTH.	WEST.	WEST.			WEST.	
June 16.	34 27	58 56	$\left\{ \begin{array}{l} 13^{\circ} 5' \\ 15 \quad 5 \\ 19 22 \\ 8 \quad 15 \\ 17 53 \\ 7 \quad 13 \end{array} \right.$	$\left\{ \begin{array}{l} S.S.W. \frac{1}{2} W. \\ S.W. \\ W.S. \\ N.E. \frac{1}{2} E. \\ W.S.W. \\ E. \end{array} \right.$	$\left\{ \begin{array}{l} -1^{\circ} 50' \\ -3 \quad 0 \\ -4 \quad 45 \\ +5 \quad 5 \\ -4 \quad 20 \\ +5 \quad 10 \end{array} \right.$	$\left\{ \begin{array}{l} 11^{\circ} 15' \\ 12 \quad 5 \\ 14 \quad 37 \\ 13 \quad 20 \\ 13 \quad 33 \\ 12 \quad 23 \end{array} \right.$	12 52
17.	34 54	56 37	$\left\{ \begin{array}{l} 16 32 \\ 19 17 \\ 17 53 \\ 10 29 \end{array} \right.$	$\left\{ \begin{array}{l} N.N.W. \\ W.S.W. \\ W. \frac{1}{2} S. \\ S.E. \frac{1}{2} E. \end{array} \right.$	$\left\{ \begin{array}{l} -2 \quad 35 \\ -4 \quad 25 \\ -5 \quad 5 \\ +4 \quad 5 \end{array} \right.$	$\left\{ \begin{array}{l} 13 \quad 57 \\ 14 \quad 52 \\ 12 \quad 48 \\ 14 \quad 34 \end{array} \right.$	14 3
19.	35 25	51 1	14 55	S.E. $\frac{1}{2}$ S.	+2 40	17 35	
"	35 29	50 45	20 3	N. $\frac{1}{2}$ W.	-1 20	18 43	
20.	35 32	50 35	11 59	E. $\frac{1}{2}$ S.	+4 55	16 54	
"	35 34	50 21	$\left\{ \begin{array}{l} 13 \quad 24 \\ 15 \quad 35 \\ 13 \quad 0 \end{array} \right.$	$\left\{ \begin{array}{l} N.E. \\ N.E. \frac{1}{2} N. \\ E. \end{array} \right.$	$\left\{ \begin{array}{l} +3 \quad 45 \\ +3 \quad 0 \\ +5 \quad 15 \end{array} \right.$	$\left\{ \begin{array}{l} 17 \quad 9 \\ 18 \quad 35 \\ 18 \quad 15 \end{array} \right.$	18 0
21.	36 4	49 5	$\left\{ \begin{array}{l} 16 \quad 12 \\ 15 \quad 2 \end{array} \right.$	$\left\{ \begin{array}{l} N.E. \frac{1}{2} E. \\ N.E. \frac{1}{2} E. \end{array} \right.$	$\left\{ \begin{array}{l} +4 \quad 15 \\ +4 \quad 15 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 27 \\ 19 \quad 17 \end{array} \right.$	19 52
"	36 33	47 58	$\left\{ \begin{array}{l} 17 \quad 11 \\ 23 \quad 38 \end{array} \right.$	$\left\{ \begin{array}{l} S.E. \frac{1}{2} S. \\ W. \frac{1}{2} S. \end{array} \right.$	$\left\{ \begin{array}{l} +2 \quad 40 \\ -4 \quad 50 \end{array} \right.$	$\left\{ \begin{array}{l} 19 \quad 51 \\ 18 \quad 48 \end{array} \right.$	19 19
22.	37 24	44 14	$\left\{ \begin{array}{l} 22 \quad 13 \\ 16 \quad 54 \end{array} \right.$	$\left\{ \begin{array}{l} S. \frac{1}{2} W. \frac{1}{2} W. \\ E. \end{array} \right.$	$\left\{ \begin{array}{l} -1 \quad 0 \\ +5 \quad 15 \end{array} \right.$	$\left\{ \begin{array}{l} 21 \quad 13 \\ 22 \quad 9 \end{array} \right.$	21 41
23.	37 54	41 44	25 21	S. $\frac{1}{2}$ W. $\frac{1}{2}$ W.	-1 0	24 21	
24.	38 3	39 17	$\left\{ \begin{array}{l} 18 \quad 31 \\ 27 \quad 50 \\ 19 \quad 0 \end{array} \right.$	$\left\{ \begin{array}{l} E. \frac{1}{2} N. \frac{1}{2} N. \\ S.W. \frac{1}{2} W. \frac{1}{2} W. \\ E. \frac{1}{2} N. \end{array} \right.$	$\left\{ \begin{array}{l} +5 \quad 10 \\ -4 \quad 10 \\ +5 \quad 20 \end{array} \right.$	$\left\{ \begin{array}{l} 23 \quad 41 \\ 23 \quad 40 \\ 24 \quad 20 \end{array} \right.$	24 2
25.	38 23	37 22	$\left\{ \begin{array}{l} 19 \quad 42 \\ 20 \quad 31 \\ 27 \quad 2 \end{array} \right.$	$\left\{ \begin{array}{l} E.S.E. \\ E. \frac{1}{2} N. \frac{1}{2} N. \\ S.S.W. \frac{1}{2} W. \end{array} \right.$	$\left\{ \begin{array}{l} +4 \quad 45 \\ +5 \quad 15 \\ -1 \quad 45 \end{array} \right.$	$\left\{ \begin{array}{l} 24 \quad 27 \\ 25 \quad 46 \\ 25 \quad 17 \end{array} \right.$	25 31
26.	38 23	35 48	$\left\{ \begin{array}{l} 20 \quad 50 \\ 21 \quad 57 \end{array} \right.$	$\left\{ \begin{array}{l} N.E. \frac{1}{2} E. \frac{1}{2} E. \\ S.E. \frac{1}{2} E. \end{array} \right.$	$\left\{ \begin{array}{l} +5 \quad 5 \\ +1 \quad 10 \end{array} \right.$	$\left\{ \begin{array}{l} 25 \quad 55 \\ 26 \quad 7 \end{array} \right.$	26 1
27.	38 18	34 41	$\left\{ \begin{array}{l} 27 \quad 31 \\ 30 \quad 4 \end{array} \right.$	$\left\{ \begin{array}{l} S.W. \frac{1}{2} S. \frac{1}{2} S. \\ W.N.W. \end{array} \right.$	$\left\{ \begin{array}{l} -2 \quad 10 \\ -5 \quad 20 \end{array} \right.$	$\left\{ \begin{array}{l} 25 \quad 21 \\ 24 \quad 41 \end{array} \right.$	25 3
29.	38 10	31 45	20 36	S.E.	+3 30	24 6	
"	37 52	31 6	24 48	N. $\frac{1}{2}$ E. $\frac{1}{2}$ E.	+2 5	26 53	
30.	38 30	31 13	$\left\{ \begin{array}{l} 23 \quad 45 \\ 21 \quad 21 \end{array} \right.$	$\left\{ \begin{array}{l} S. \frac{1}{2} W. \\ E.S.E. \end{array} \right.$	$\left\{ \begin{array}{l} -0 \quad 30 \\ +4 \quad 50 \end{array} \right.$	$\left\{ \begin{array}{l} 23 \quad 15 \\ 26 \quad 11 \end{array} \right.$	24 43
July 9.	37 45	25 40	...	...	...	24 39	Results of swinging on 25 points.
11.	36 32	23 49	20 53	S.S.E. $\frac{1}{2}$ E.	+2 5	22 58	
"	36 21	23 24	17 39	E.	+5 25	23 4	
12.	35 27	22 7	20 48	S.S.E. $\frac{1}{2}$ E.	+2 20	23 8	
"	35 3	21 25	17 55	E. $\frac{1}{2}$ N.	+5 20	23 15	
13.	34 27	20 40	18 12	S.E. $\frac{1}{2}$ E.	+3 50	22 32	
"	34 11	19 52	19 42	N.N.E. $\frac{1}{2}$ E.	+2 30	22 12	
18.	31 16	17 40	$\left\{ \begin{array}{l} 23 \quad 54 \\ 24 \quad 7 \end{array} \right.$	$\left\{ \begin{array}{l} S.W. \frac{1}{2} W. \\ S.W. \frac{1}{2} W. \end{array} \right.$	$\left\{ \begin{array}{l} -3 \quad 5 \\ -3 \quad 5 \end{array} \right.$	$\left\{ \begin{array}{l} 20 \quad 49 \\ 21 \quad 2 \end{array} \right.$	20 55
"	30 38	18 5	22 52	S. $\frac{1}{2}$ W.	-0 30	22 22	
19.	28 46	18 9	$\left\{ \begin{array}{l} 20 \quad 25 \\ 21 \quad 24 \\ 21 \quad 25 \end{array} \right.$	$\left\{ \begin{array}{l} S. \frac{1}{2} E. \frac{1}{2} E. \\ S. \frac{1}{2} W. \\ S.W. \frac{1}{2} W. \end{array} \right.$	$\left\{ \begin{array}{l} +0 \quad 55 \\ -0 \quad 25 \\ -3 \quad 0 \end{array} \right.$	$\left\{ \begin{array}{l} 21 \quad 20 \\ 20 \quad 59 \\ 21 \quad 25 \end{array} \right.$	21 15

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
	NORTH.	WEST.	WEST.			WEST.	
1873.							
July 19.	28 14	18 24	23 17	w.s.w.	-3 15	19 32	
			22 34	s.w. <sup>1</sup> / <sub>2</sub> w.	-3 25	19 9	
20.	27 20	19 25	23 38	w. <sup>1</sup> / <sub>2</sub> s.	-1 20	19 18	19 40
			23 54	s.w. <sup>1</sup> / <sub>2</sub> w.	-3 20	20 34	
"	26 40	19 53	23 18	s.w. <sup>1</sup> / <sub>2</sub> w.	-3 20	19 58	
21.	25 49	20 12	17 19	N.E.	+3 20	21 9	
22.	24 24	21 12	21 47	s.w.	-2 30	19 17	
"	23 58	21 18	18 24	N.E. <sup>1</sup> / <sub>2</sub> N.	+2 30	20 54	
23.	22 41	21 54	21 48	s.w. <sup>1</sup> / <sub>2</sub> s.	-2 12	19 36	
"	22 18	22 0	16 58	N.E. <sup>1</sup> / <sub>2</sub> E.	+4 5	21 3	
24.	21 26	22 41	21 32	s.w. <sup>1</sup> / <sub>2</sub> w.	-3 5	18 27	
"	20 53	23 0	22 22	w.s.w.	-3 30	18 52	
25.	19 25	24 0	22 18	s.w. <sup>1</sup> / <sub>2</sub> w.	-2 35	19 43	
"	19 4	24 6	19 37	s. <sup>1</sup> / <sub>2</sub> w.	-0 10	19 27	
26.	18 0	24 36	21 4	s.w. <sup>1</sup> / <sub>2</sub> s.	-2 5	18 59	
"	17 54	24 39	19 31	s.s.e. <sup>1</sup> / <sub>2</sub> E.	+1 30	21 1	
Aug. 6.	15 54	24 29	18 2	s.s.e.	+1 5	19 7	
10.	14 30	23 21	18 39	s. <sup>1</sup> / <sub>2</sub> E.	-1 9	17 30	
11.	12 44	22 43	19 17	s. <sup>1</sup> / <sub>2</sub> E.	+0 35	19 52	19 32
"	12 15	22 28	18 38	s. <sup>1</sup> / <sub>2</sub> E.	+0 35	19 13	
			21 43	s.w.	-1 50	19 53	
12.	11 53	20 50	...	...	...	19 48	Result of swinging on 23 points.
13.	10 48	20 33	19 39	s. <sup>1</sup> / <sub>2</sub> w.	-0 20	19 19	
"	10 19	20 12	18 22	s.e. <sup>1</sup> / <sub>2</sub> s.	+1 50	20 12	
			19 19	s.e.	+2 0	21 19	
14.	9 30	18 39	18 16	s.e.	+2 0	20 16	21 1
			19 29	s.e.	+2 0	21 29	
16.	7 8	16 15	18 40	s.e.	+2 0	20 40	
"	7 1	15 55	23 53	w. <sup>1</sup> / <sub>2</sub> N.	-3 15	20 38	
			23 2	w. <sup>1</sup> / <sub>2</sub> N.	-3 15	19 47	
17.	6 48	16 31	23 14	w.	-3 5	20 9	20 2
			23 14	w.	-3 5	20 9	
			19 7	s.e. <sup>1</sup> / <sub>2</sub> s.	+1 40	20 47	
18.	6 22	16 12	18 47	s.e. <sup>1</sup> / <sub>2</sub> s.	+1 40	20 27	20 36
			18 54	s.e. <sup>1</sup> / <sub>2</sub> s.	+1 40	20 34	
"	6 0	15 21	19 15	s.e.	+1 45	21 0	
19.	5 47	14 34	19 12	s.e.	+1 45	20 57	21 12
			18 21	E.	+3 5	21 26	
20.	4 40	13 52	22 52	s.s.w.	-0 45	22 7	
"	4 9	14 1	22 15	s.w.	-1 40	20 35	
			23 3	s.w. <sup>1</sup> / <sub>2</sub> w.	-2 15	20 48	
21.	3 13	14 49	20 44	s. <sup>1</sup> / <sub>2</sub> E.	+0 38	20 6	20 11
			19 26	s.	+0 12	19 38	
22.	2 52	16 55	23 14	w.	-3 5	20 9	19 56
			19 5	s. <sup>1</sup> / <sub>2</sub> E.	+0 38	19 43	
"	2 45	17 50	22 10	w. <sup>1</sup> / <sub>2</sub> N. <sup>1</sup> / <sub>2</sub> N.	-3 15	18 55	
			21 28	w. <sup>1</sup> / <sub>2</sub> s. <sup>1</sup> / <sub>2</sub> s.	-2 40	18 48	
23.	2 28	19 49	22 40	w.	-3 0	19 40	19 26
			22 49	w.	-3 0	19 49	
"	2 25	20 2	18 56	s.e. <sup>1</sup> / <sub>2</sub> s.	+1 40	20 36	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	NORTH.	WEST.	WEST.			WEST.	
Aug. 24.	2 19	21 43	{ 22 25 22 22	w. w.	-3 0 -3 0	{ 19 25 19 22	Result of swinging on 23 points.
"	2 6	22 53	18 33	S. $\frac{1}{2}$ E.	+0 27	19 0	
26.	1 26	26 19	{ 20 6 20 53 20 19 20 4	w. w. w. w.	-3 0 -3 0 -3 0 -3 0	{ 17 6 17 53 17 19 17 4	
			{ 20 49 16 5	W. $\frac{1}{2}$ N. $\frac{1}{2}$ E. S. E. $\frac{1}{2}$ E.	-3 10 +2 15	{ 17 39 18 20	
			{ 19 32 15 3	w. S. S. E.	-2 55 +1 0	{ 16 37 16 3	
			...	...	...	15 51	
30.	0 12	30 17	{ 16 47 13 28	S. W. $\frac{1}{2}$ S. S. E.	-1 10 +1 50	{ 15 37 15 18	
			...	...	...	...	
"	SOUTH.						
"	0 23	30 31	15 48	S. S. W. $\frac{1}{2}$ W.	-0 50	15 18	
31.	1 42	30 57	{ 15 46 11 51	S. S. W. E.	-0 45 +2 50	{ 15 1 14 41	
			15 34	S. W.	-1 30	14 4	
Sept. 1.	3 32	32 16	12 37	S. $\frac{1}{2}$ E.	+0 42	13 19	At anchor—Fernando Noronha.
1 and 2.	3 51	32 55	13 4	S. E. $\frac{1}{2}$ S.	+1 22	14 26	
3.	4 3	32 47	14 1	S. $\frac{1}{2}$ W.	-0 18	13 43	
4.	4 48	33 36	{ 14 43 14 40	S. W. S. W.	-1 15 -1 15	{ 13 28 13 25	
			13 47	S. W. $\frac{1}{2}$ W.	-1 40	12 7	
"	5 0	33 45	13 47	S. W. $\frac{1}{2}$ W.	-1 40	12 7	
5.	4 37	32 52	15 14	S. W. $\frac{1}{2}$ W.	-1 50	13 24	
6.	5 36	34 13	{ 13 54 14 59	S. W. $\frac{1}{2}$ W. S. W. $\frac{1}{2}$ W.	-1 50 -2 0	{ 12 4 12 59	
			13 48	S. W. $\frac{1}{2}$ W.	-1 50	11 58	
"	5 46	34 27	{ 14 13 12 20	S. W. $\frac{3}{4}$ W. S. $\frac{1}{2}$ E.	-1 45 +0 40	{ 12 28 13 0	
			14 1	S. W. $\frac{1}{2}$ W.	-1 50	12 11	
7.	6 16	34 33	13 33	S. S. W.	-0 40	12 53	
"	6 57	34 41	{ 12 41 11 20	S. $\frac{1}{2}$ W. $\frac{1}{2}$ W. S. E. $\frac{1}{2}$ S.	-0 30 +1 25	{ 12 11 12 45	
			11 9	S. S. E. $\frac{1}{2}$ E.	+1 12	12 21	
8.	7 27	34 1	11 9	S. S. E. $\frac{1}{2}$ E.	+1 12	12 21	
"	7 59	34 27	{ 14 16 15 36	S. W. $\frac{1}{2}$ W. W. $\frac{1}{2}$ S.	-1 50 -2 35	{ 12 26 13 1	
			12 50	S. S. W.	-0 40	12 10	
9.	8 33	34 30	{ 13 2 12 56	S. W. S. S. W.	-1 27 -0 40	{ 11 35 12 16	
			11 32	S. S. E.	+1 0	12 32	
10.	9 12	34 52	{ 12 38 12 35	S. S. W. S. S. W.	-0 40 -0 40	{ 11 58 11 55	
			10 8	S. E. $\frac{1}{2}$ S.	+1 25	11 33	
11.	10 11	35 18	{ 14 52 12 44	W. $\frac{1}{2}$ N. S. W. $\frac{1}{2}$ W.	-3 0 -1 47	{ 11 52 10 57	
			12 14	S. W. $\frac{1}{2}$ W.	-1 47	10 27	
			13 18	S. W. $\frac{1}{2}$ W.	-1 47	11 31	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	SOUTH.	WEST.	WEST.			WEST.	
Sept. 12.	10 49	36 8	12 30	S.W. <sup>1</sup> / <sub>2</sub> W.	-1 47	10 13	10 50
			8 30	E. <sup>1</sup> / <sub>2</sub> S.	+2 35	11 5	
			12 6	S.W.	-1 25	10 41	
			12 47	S.W.	-1 25	10 52	
13.	11 10	36 58	11 45	S.W. <sup>1</sup> / <sub>2</sub> W.	-1 48	9 57	10 24
			9 42	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 10	10 52	
14.	13 6	38 7	10 6	S.W. <sup>1</sup> / <sub>2</sub> S.	-1 0	9 6	9 7
			11 50	N.W. <sup>1</sup> / <sub>2</sub> W.	-2 50	9 0	
			6 24	E. <sup>1</sup> / <sub>2</sub> N.	+2 50	9 14	
26.	13 47	38 0	...	...	...	8 56	Result of swinging on 22 points.
27.	14 31	37 4	6 37	E. <sup>1</sup> / <sub>2</sub> N.	+2 40	9 17	
			8 13	S.E.	+1 40	9 53	9 35
			8 15	S.E. <sup>1</sup> / <sub>2</sub> S.	+1 20	9 35	
28.	15 12	36 56	9 21	S.S.E.	+1 0	10 21	9 22
			8 54	S. <sup>1</sup> / <sub>2</sub> W.	-0 10	8 41	
			9 0	S. <sup>1</sup> / <sub>2</sub> W.	-0 10	8 50	9 56
29.	16 27	37 1	9 45	S. <sup>1</sup> / <sub>2</sub> W.	0 0	9 45	
			9 58	S.	+0 10	10 8	10 30
			9 49	S.	+0 10	9 59	
30.	17 26	36 39	9 17	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 10	10 27	10 13
			9 24	S.E. <sup>1</sup> / <sub>2</sub> S.	+1 10	10 34	
			9 44	S.S.E.	+1 0	10 44	9 43
31.	18 47	35 52	9 3	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 0	10 3	
			8 9	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 0	9 9	11 7
			7 58	S.S.E.	+1 0	8 58	
Oct. 1.	21 50	35 41	10 4	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 0	11 4	10 13
			10 10	S.S.E.	+1 0	11 10	
			10 27	S.	+0 10	10 37	9 32
2.	24 22	34 33	10 30	S.W.	-1 25	9 5	
			11 13	S.W.	-1 25	9 48	10 36
			10 38	S.S.W.	-0 25	10 13	
3.	25 2	33 53	11 46	S.S.W.	-0 25	11 21	11 16
			10 8	S. <sup>1</sup> / <sub>2</sub> W.	0 0	10 8	
			9 0	S. <sup>1</sup> / <sub>2</sub> W.	0 0	9 0	11 25
4.	26 15	32 54	9 40	S. <sup>1</sup> / <sub>2</sub> E. <sup>1</sup> / <sub>2</sub> E.	+0 50	10 30	
			10 10	S.S.E.	+0 50	11 30	11 45
			9 32	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+0 55	10 27	
5.	27 19	31 34	9 25	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+0 55	10 20	11 57
			9 6	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 0	10 6	
			10 28	S.E. <sup>1</sup> / <sub>2</sub> S.	+1 5	11 33	11 33
6.	28 15	30 54	10 54	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+1 0	11 54	
			10 15	S.E.	+1 30	11 45	11 25
			8 42	N.E.	+1 50	10 32	
7.	29 15	29 54	8 30	N.E. <sup>1</sup> / <sub>2</sub> E.	+1 50	10 20	11 45
			11 3	N.N.E. <sup>1</sup> / <sub>2</sub> E.	+0 50	11 53	
			11 43	N. <sup>1</sup> / <sub>2</sub> E.	+0 50	12 33	11 45
8.	30 15	28 54	9 43	N.E.	+1 50	11 33	
			10 32	S.E.	+1 30	12 2	11 45
			10 27	S.E.	+1 30	11 57	
9.	31 15	27 54	10 7	S.E.	+1 30	11 37	11 45
			10 13	S.E.	+1 30	11 13	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	SOUTH.	WEST.	WEST.			WEST.	
Oct. 4.	28 7	30 23	{ 12 7 12 14 11 30	S.E. S.E. S.E.	+1 30 +1 30 +1 30	{ 13 37 13 44 13 0	
5.	28 44	29 20	{ 11 38 11 16	S.E. S.E.	+1 30 +1 30	{ 13 8 12 46	12 58
„	29 9	28 45	12 12	S.E. <sup>b</sup> s.	+1 20	13 32	
6.	29 34	28 8	{ 12 2 11 14 15 27 11 23 15 4	S.E. S.E. <sup>1</sup> / <sub>2</sub> E. N.W. <sup>1</sup> / <sub>2</sub> N. N.N.E. N.W. <sup>1</sup> / <sub>2</sub> N.	+1 25 +1 30 -1 50 +0 30 -2 10	{ 13 27 12 44 13 37 11 53 12 54	12 55
7.	29 1	26 19	16 52	S.W. <sup>1</sup> / <sub>2</sub> S.	-1 0	15 52	
8.	31 5	27 3	15 13	S. <sup>1</sup> / <sub>4</sub> E.	+0 30	15 43	
11.	35 41	21 0	{ 15 18 14 16	E. <sup>b</sup> s. E.N.E.	+1 50 +1 50	{ 17 8 16 6	16 37 Rolling.
12.	36 0	18 27	16 53	S.E. <sup>b</sup> s.	+1 10	18 3	
13.	36 8	14 59	{ 18 26 18 20	E. <sup>b</sup> s. S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+1 50 +1 45	{ 20 16 20 5	20 10 Rolling heavily.
„	36 7	13 41	20 3	S.E. <sup>b</sup> E.	+1 40	21 43	
14.	36 12	12 18	{ 21 38 20 2	S.S.W. N.N.E.	-0 10 +0 38	{ 21 28 20 40	21 4
„	36 24	12 18	...	...	...	21 15	Result of swinging on 15 points. At anchor—Tristan d'Acunha.
15.	37 2	12 18	21 37	N. <sup>b</sup> W.	-0 50	20 47	
20.	36 43	7 13	21 30	N.N.E.	+0 20	21 50	
21.	36 43	3 18	24 9	E.N.E.	+1 44	25 53	
22.	36 0	0 19	26 56	S.E. <sup>b</sup> E.	+1 34	28 30	Rolling heavily.
25.	36 6	8 6	28 36	E. <sup>b</sup> s. <sup>3</sup> / <sub>4</sub> S.	+1 44	30 20	
„	36 22	8 36	29 3	E. <sup>3</sup> / <sub>4</sub> S.	+1 50	30 53	
26.	36 0	10 33	28 45	E.S.E.	+1 44	30 29	
27.	35 35	16 7	{ 30 22 30 21	E.S.E. W.S.W.	+1 44 -1 14	{ 32 6 29 7	30 36
Dec. 17.	34 44	18 35	{ 29 50 30 10 28 32	S. <sup>b</sup> W. S.S.W. S.S.W.	... -0 15 -0 15	{ 29 50 29 55 28 17	29 52
18.	35 4	18 38	{ 31 42 29 28	N.N.W. S.S.W.	-0 55 -0 15	{ 30 47 29 13	29 26
„	35 47	18 54	29 53	S. <sup>b</sup> W.	...	29 53	
19.	36 49	19 25	{ 31 13 31 45 30 36 33 10 30 39	S.W. <sup>1</sup> / <sub>2</sub> W. S.W. <sup>1</sup> / <sub>2</sub> W. S. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E. S. <sup>b</sup> E. S. <sup>b</sup> W.	-0 43 -0 43 +0 20 +0 15 ...	{ 30 30 31 2 30 16 32 55 30 39	31 11
20.	37 37	19 34	{ 30 35 30 46 31 56	S. <sup>b</sup> W. S. <sup>b</sup> W. S. <sup>b</sup> E.	... ... +0 10	{ 30 35 30 46 32 6	30 40
„	38 41	20 42	31 27	S. <sup>b</sup> W.	...	31 27	
23.	44 15	30 58	{ 30 37 32 10	S. <sup>b</sup> E. S.S.E.	+0 10 +0 18	{ 30 47 32 28	31 7 Rolling.
„	45 8	32 31	32 10	S.S.E.	+0 18	32 28	
24.	45 54	34 32	34 24	S. <sup>b</sup> E.	+0 10	34 34	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1873.	SOUTH.	EAST.	WEST.			WEST.	
Dec. 25.	46° 30'	37° 20'	33° 59'	S.S.E. $\frac{1}{2}$ E.	+ 0° 18'	34° 17'	
27.	46 46	38 0	33 39	N.	- 0 10	33 29	
			34 3	S.	+ 0 10	34 13	33 51
28.	46 47	39 42	34 5	S.	+ 0 10	34 15	
„	46 46	41 52	34 47	S.E.	+ 0 35	35 22	
„	46 48	42 28	36 14	S.E. $\frac{1}{2}$ E.	+ 0 45	36 59	
29.	46 46	45 51	34 12	S.	+ 0 10	34 22	34 50
			34 23	E. $\frac{1}{2}$ S.	+ 0 55	35 18	
30.	46 16	48 40	32 49	E. $\frac{1}{2}$ S.	+ 0 55	33 44	
1874.							
Jan. 1.	46 45	50 20	34 0	S.S.W.	...	34 0	
3.	46 53	51 52	31 35	E.N.E.	+ 0 40	32 15	
Feb. 2.	51 52	71 19	30 50	S.W.	...	30 50	32 55
			35 0	S.W. $\frac{1}{2}$ W.	...	35 0	
			37 56	S.W. $\frac{1}{2}$ W.	+ 0 30	38 26	
			39 41	E.	...	39 41	
4.	52 39	71 20	39 17	E. $\frac{1}{2}$ S.	- 0 10	39 7	38 51
			39 20	E. $\frac{1}{2}$ S.	- 0 8	39 12	
			37 48	E. $\frac{1}{2}$ N.	...	37 48	
			38 5	S.W. $\frac{1}{2}$ S.	+ 0 40	38 45	
7.	53 44	73 22	37 54	S.S.W.	+ 0 30	38 24	38 49
			38 48	S.S.W.	+ 0 30	39 18	
			41 59	S.W. $\frac{1}{2}$ W.	+ 0 30	42 29	
8.	55 4	74 30	41 59	S.W. $\frac{1}{2}$ S.	+ 0 55	42 54	42 33
			41 28	S.S.W. $\frac{1}{2}$ W.	+ 0 48	42 16	
			43 47	S.S.W. $\frac{1}{2}$ W.	+ 0 48	44 35	
„	56 7	75 13	42 50	S.W. $\frac{1}{2}$ S.	+ 0 55	43 45	43 56
			42 32	S.W. $\frac{1}{2}$ S.	+ 0 55	43 27	
			45 7	S.S.W.	+ 0 40	45 47	
			43 57	S.W. $\frac{1}{2}$ W.	+ 1 10	45 7	
9.	58 14	76 7	45 19	S.W. $\frac{1}{2}$ S.	+ 0 55	46 14	45 26
			44 10	S.W. $\frac{1}{2}$ S.	+ 0 55	45 5	
			44 16	S.S.W.	+ 0 40	44 56	
			46 21	S.S.W.	+ 0 40	47 1	
10.	59 37	77 1	46 52	S.W. $\frac{1}{2}$ S.	+ 1 0	47 52	47 35
			47 3	S.S.W. $\frac{1}{2}$ W.	+ 0 50	47 53	
„	60 36	78 23	49 1	S.W.	+ 0 20	49 21	
13.	64 56	80 0	53 51	S.W. $\frac{1}{2}$ W.	+ 1 20	55 11	
14.	65 42	79 47	56 44	S.W.	+ 0 20	57 4	54 57
			52 39	S.	+ 0 12	52 51	
			54 26	W. $\frac{1}{2}$ N.	+ 1 5	55 41	
15.	65 57	78 32	56 8	W.	+ 1 10	57 18	56 38
			55 55	W. $\frac{1}{2}$ N.	+ 1 0	56 55	
			58 6	E. $\frac{1}{2}$ N.	- 1 5	57 1	
16.	66 30	78 24	58 19	E. $\frac{1}{2}$ N.	- 1 5	57 14	56 48
			57 3	E. $\frac{1}{2}$ N.	- 1 12	55 51	
			58 18	E. $\frac{1}{2}$ N.	- 1 12	57 6	
17.	65 24	78 21	57 4	E.N.E.	- 1 35	55 29	
			58 4	E.N. $\frac{1}{2}$ E.	- 0 40	57 24	
19.	64 37	85 50	56 41	S.W. $\frac{1}{2}$ S.	+ 1 0	57 41	56 57
			54 55	S.S.W. $\frac{1}{2}$ W.	+ 0 50	55 45	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1874.	SOUTH.	EAST.	WEST.			WEST.	
Feb. 19.	64 55	86 7	59° 35'	E.N.E.	-0° 55'	58° 40'	
			59 29	E.N.E.	-0 55	58 34	58 25
			58 55	E.N.E.	-0 55	58 0	
20.	63 13	87 50	58 17	S.E.	-1 18	56 59	
21.	63 30	88 57	...	...	...	56 26	Result of swinging on 19 points.
22.	63 34	91 23	55 58	S.	+0 10	56 8	
			56 28	S.	+0 10	56 38	56 35
			56 45	S. 1/2 W.	+0 15	57 0	
			57 22	S.	+0 10	57 32	
23.	64 12	93 8	58 49	S. 1/2 W.	+0 10	58 59	58 25
			58 34	S.	+0 10	58 44	
			59 15	S. 1/2 W.	+0 15	59 30	
			59 56	S. 1/2 E.	-0 20	59 36	
"	64 18	94 22	60 32	E.N.E.	-1 12	59 20	59 34
			60 13	S. 1/2 E.	-0 24	59 49	
27.	61 40	97 38	51 28	E. 1/2 S.	-1 35	49 53	
Mar. 3.	54 0	108 33	33 10	E. 1/2 N.	-1 12	31 58	
			32 58	E.N.E.	-1 0	31 58	31 38
			32 34	E.S.E.	-1 36	30 58	
			31 51	N.E. 1/2 E.	-0 54	30 57	
4.	53 32	109 19	30 30	N.E.	-0 38	29 52	30 24
5.	51 32	114 34	23 9	E.	-1 25	21 44	
7.	50 1	123 9	6 46	N. 1/2 W.	+0 10	6 56	8 1
8.	49 43	125 34	10 11	E. 1/2 N.	-1 5	9 6	Heavy lurches.
9.	48 12	130 22	8 32	E. 1/2 S.	-1 35	6 57	
			0 24	N.N.E.	-0 20	0 4	
			EAST.			EAST.	
12.	44 12	132 12	1 43	N.E. 1/2 N.	-0 27	2 10	
			1 16	N.E. 1/2 N.	-0 27	1 13	1 36
			0 20	N.E.	-0 35	0 53	
			5 25	W. 1/2 N.	+1 18	4 7	
13.	42 40	131 11	3 47	S.S.W. 1/2 W.	+1 0	2 47	3 17
			3 46	S.S.W.	+0 50	2 56	
14.	41 39	136 0	3 21	N.E. 1/2 E.	+0 46	2 35	
"	40 58	137 50	3 35	N.E.	+0 38	2 57	
April 4.	36 59	150 19	...	...	...	9 57	Result of swinging on 24 points.
June 16.	34 25	154 59	11 29	S.W. 1/2 S.	+1 10	10 19	10 29
			11 6	S. 1/2 W.	+0 27	10 39	
17.	34 53	155 30	10 48	W. 1/2 S.	+1 30	9 18	10 5
			9 33	S.E.	-1 20	10 53	
18.	34 38	156 12	9 15	E.	-1 22	10 37	
19.	36 33	157 54	10 11	S.E. 1/2 E.	-1 25	11 36	
"	36 41	158 29	12 4	S. 1/2 W.	+0 23	11 41	
20.	36 57	160 18	10 45	E.	-1 20	12 5	
22.	38 40	166 19	13 46	E.	-1 20	15 6	14 9
			13 28	N.W. 1/2 N.	+0 15	13 13	
23.	38 50	169 20	14 10	N.W. 1/2 W.	+0 36	13 34	
"	38 56	169 45	11 11	E.	-1 20	12 31	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
	SOUTH.	EAST.	EAST.			EAST.	
1871.							
July 7.	11 31	176 15	11 59	N.N.E.	-0 18	15 17	
8.	10 26	177 44	12 29	S.E.	-1 15	11 11	
9.	38 31	178 58	15 40	N.E.	-0 10	15 50	15 2
10.	37 12	179 43	13 30	S.	...	13 30	
		WEST.	12 47	N.N.E.	-0 18	13 5	
11.	36 7	178 21	12 13	E.N.	-1 5	13 18	
12.	34 0	177 49	13 10	N.E.N.	-0 40	11 20	13 49
13.	30 54	177 55	12 32	N.W.	...	12 32	
			11 42	N.N.W.	...	11 42	11 41
			11 40	N.N.W. <sup>1</sup> / <sub>2</sub> W.	...	11 40	
14.	29 53	178 14	11 52	N.W. <sup>1</sup> / <sub>2</sub> N.	+0 10	11 42	11 26
			12 0	S.W. <sup>1</sup> / <sub>2</sub> S.	+0 50	11 10	
15.	28 33	177 50	11 29	E.	-1 10	12 39	
16.	28 7	177 11	11 3	N.E. <sup>1</sup> / <sub>2</sub> N.	-0 40	11 43	
17.	26 13	174 8	9 48	N.E. <sup>1</sup> / <sub>2</sub> N.	-0 40	10 28	
18.	24 54	172 55	9 45	N. <sup>1</sup> / <sub>2</sub> W.	...	9 45	
19.	23 18	173 26	9 46	N.W. <sup>1</sup> / <sub>2</sub> N.	+0 10	9 36	
20.	20 9	177 47	9 18	W. <sup>1</sup> / <sub>2</sub> N.	+0 15	9 3	
Aug. 2.	18 32	179 3	9 17	S.W.	+0 15	9 2	
11.	19 15	177 40	...	...	...	9 51	
13.	18 54	176 10	9 46	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	9 41	
			9 3	W.S.W.	+0 30	8 33	9 32
			10 38	W.	+0 15	10 23	
14.	19 6	175 41	10 19	S.W. <sup>1</sup> / <sub>2</sub> W.	+0 20	9 59	
			10 52	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	10 47	
15.	19 1	174 58	9 35	W.S.W.	-0 5	9 40	9 51
			8 51	N.W.	-0 15	9 6	
			10 48	W.	+0 15	10 33	
16.	18 9	172 12	10 10	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	10 5	10 35
			11 22	W. <sup>1</sup> / <sub>4</sub> N.	+0 15	11 7	
			9 1	W. <sup>1</sup> / <sub>2</sub> N. <sup>1</sup> / <sub>4</sub> N.	...	9 1	
19.	16 53	165 58	9 20	W.	+0 15	9 5	9 32
			10 46	W.	+0 15	10 31	
20.	16 17	165 20	9 19	S.W.	+0 15	9 4	
			9 50	W.	+0 15	9 35	
21.	16 3	161 9	8 25	S.W.	+0 36	8 24	9 0
			8 49	W. <sup>1</sup> / <sub>2</sub> N.	+0 9	8 16	
			9 3	W. <sup>1</sup> / <sub>2</sub> N.	+0 9	8 40	8 36
22.	15 26	159 16	8 52	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	8 54	
			7 48	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	8 47	
23.	14 18	156 22	7 22	W. <sup>1</sup> / <sub>2</sub> N.	+0 5	7 43	
			8 27	W. <sup>1</sup> / <sub>2</sub> N.	+0 9	7 13	7 44
			6 23	E.S.E.	-0 30	8 18	
24.	14 7	153 43	6 33	S.E. <sup>1</sup> / <sub>2</sub> E. <sup>1</sup> / <sub>2</sub> E.	-0 33	6 53	7 0
			7 0	E.	-0 15	7 6	
25.	13 51	151 55	7 21	S.W.	+0 36	7 15	
			7 15	S.W.	+0 12	6 15	6 54

Rolling heavily.

Result of swinging on 22 points.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1874.	SOUTH.	EAST.	EAST.			EAST.	
Aug. 26.	13 39	150 56	{ 6° 33' W. <sup>b</sup> N. 6° 36' N.W. <sup>3</sup> / <sub>4</sub> W.	+0° 5' -0 12	{ 6° 28' 6 48	{ 6 38	
27.	13 14	149 30	{ 6° 6' W.N.W. 5° 38' W. <sup>b</sup> N.	-0 5 +0 5	{ 6 11 5 33	{ 5 52	
"	13 6	148 37	{ 5° 41' S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E. 5° 19' W. <sup>b</sup> N. <sup>1</sup> / <sub>2</sub> N.	-0 32 ...	{ 6 13 5 19	{ 5 39	
28.	12 44	147 6	{ 6° 21' W. <sup>b</sup> N. 5° 22' W. <sup>3</sup> / <sub>4</sub> N.	+0 5 ...	{ 6 16 5 22	{ 5 39	
"	12 39	146 41	{ 5° 4' N.W. <sup>b</sup> W. 5° 11' W. <sup>b</sup> N. <sup>1</sup> / <sub>2</sub> N.	-0 10 ...	{ 5 14 5 11	{ 5 11	
29.	12 9	145 9	{ 4° 29' S.E. 5° 32' W.	-0 35 +0 15	{ 5 4 5 17	{ 5 11	
30.	11 44	144 52	{ 5° 38' W. 3° 25' W.N.W.	+0 15 -0 20	{ 5 23 3 45	{ 4 21	
Sept. 10.	10 1	139 49	{ 5° 20' S.W. <sup>b</sup> W. 3° 10' W.N.W.	+0 22 -0 20	{ 4 58 3 30	{ 4 14	
11.	9 37	137 58	{ 4° 53' W. <sup>1</sup> / <sub>4</sub> S. 3° 5' N.W.	-0 5 -0 27	{ 4 58 3 32	{ 4 14	
"	9 26	137 30	{ 3° 5' N.W. 3° 5' W.N.W.	-0 27 -0 20	{ 3 32 3 25	{ 3 25	
12.	9 1	136 27	{ 2° 32' N.W. <sup>b</sup> N. 2° 27' N.W. <sup>b</sup> N.	-0 24 -0 24	{ 2 56 2 51	{ 2 50	
"	8 52	135 53	{ 2° 32' N.W. <sup>b</sup> N. 3° 7' N.	-0 24 ...	{ 2 56 3 7	{ 2 50	
13.	8 20	135 9	{ 3° 7' N. 1° 43' N.N.W.	... -0 18	{ 3 7 2 1	{ 2 1	
14.	7 3	134 9	{ 1° 43' N.N.W. 2° 0' W. <sup>1</sup> / <sub>4</sub> N.	-0 18 -0 10	{ 2 1 2 10	{ 2 10	
15.	6 55	133 57	{ 2° 0' W. <sup>1</sup> / <sub>4</sub> N. 2° 33' N. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E.	-0 10 +0 15	{ 2 10 2 18	{ 2 18	
"	6 14	133 58	{ 2° 33' N. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E. 3° 45' S.W. <sup>b</sup> W.	+0 15 +0 18	{ 2 18 3 27	{ 3 27	
26.	5 48	132 14	{ 3° 45' S.W. <sup>b</sup> W. 3° 9' W. <sup>b</sup> S.	+0 18 +0 5	{ 3 27 3 4	{ 3 4	
Oct. 28.	5 30	130 44	{ 3° 9' W. <sup>b</sup> S. 1° 29' N. <sup>b</sup> W. <sup>1</sup> / <sub>4</sub> W.	+0 5 -0 10	{ 3 4 1 39	{ 1 39	
1.	4 28	129 54	{ 1° 29' N. <sup>b</sup> W. <sup>1</sup> / <sub>4</sub> W. 1° 17' N.N.W.	-0 10 -0 18	{ 1 39 1 47	{ 1 47	
4.	3 58	128 22	{ 1° 17' N.W. ... ...	-0 30 ... ...	{ 1 47 1 50	{ 1 47	
10.	3 46	128 5	{ ... 1° 17' N. 2° 10' N. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E.	... ... +0 15	{ 1 50 1 17 1 55	{ 1 57	Result of swinging on 26 points.
11.	2 55	127 11	{ 1° 17' N. 2° 10' N. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E.	... +0 15	{ 1 17 1 55	{ 1 57	
12.	1 40	127 6	{ 2° 10' N. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E. 2° 4' N. <sup>1</sup> / <sub>4</sub> E.	+0 15 +0 5	{ 1 55 1 59	{ 1 57	
13.	0 48	126 59	{ 2° 4' N. <sup>1</sup> / <sub>4</sub> E. 1° 50' S. <sup>b</sup> E.	+0 5 -0 5	{ 1 59 1 55	{ 1 55	
14.	NORTH.	0 40	{ 1° 50' S. <sup>b</sup> E. 1° 29' W.N.W.	-0 5 -0 30	{ 1 55 1 59	{ 1 59	
19.	1 55	125 30	{ 1° 29' W.N.W. 1° 6' N.W. <sup>b</sup> W. <sup>1</sup> / <sub>2</sub> W.	-0 30 -0 27	{ 1 59 1 33	{ 1 33	
21.	3 50	124 29	{ 1° 6' N.W. <sup>b</sup> W. <sup>1</sup> / <sub>2</sub> W. 1° 12' N.N.W.	-0 27 -0 25	{ 1 33 1 37	{ 1 37	
"	4 40	124 8	{ 1° 12' N.N.W. 1° 5' N.N.W.	-0 25 -0 25	{ 1 37 1 30	{ 1 30	
22.	6 13	123 15	{ 1° 5' N.N.W. 0° 45' N.W.	-0 25 -0 33	{ 1 30 1 18	{ 1 18	
25.	6 49	122 25	{ 0° 45' N.W. ... ...	-0 33 ... ...	{ 1 18 1 41	{ 1 41	Result of swinging on 23 points.
27.	8 54	121 59	{ ... 0° 56' N. <sup>b</sup> E.	... +0 15	{ 1 41 0 31	{ 0 31	
31.	10 41	122 37	{ 0° 56' N. <sup>b</sup> E. 2° 15' N.N.E.	+0 15 +0 24	{ 0 31 1 51	{ 1 51	
Nov. 2.	12 10	122 20	{ 2° 15' N.N.E. 0° 35' N.	+0 24 ...	{ 1 51 0 35	{ 0 35	
"	12 47	122 10	{ 0° 35' N. WEST. 0° 28' N.W. <sup>1</sup> / <sub>4</sub> N.	... ... -0 36	{ 0 35 0 8	{ 0 8	
3.	13 24	121 28	{ 0° 28' N.W. <sup>1</sup> / <sub>4</sub> N. 0° 10' N.W. <sup>1</sup> / <sub>2</sub> W.	-0 36 -0 40	{ 0 8 0 0	{ 0 0	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1874.	NORTH.	EAST.	EAST.			EAST.	
Nov. 13.	16° 28'	119° 24'	0° 39'	N. <sup>b</sup> W.	- 0° 15'	0° 54'	
"	16 47	119 30	0 32	N.W. <sup>b</sup> N.	- 0 45	0 13	
1875.							
Jan. 2.	22 15	114 5	...	...	...	0 50	
7.	19 56	116 6	1 21	S.E. <sup>b</sup> E.	+ 0 50	0 31	Lurching heavily.
8.	17 54	117 19	0 45	S. <sup>b</sup> E.	+ 0 6	0 39	
9.	16 56	117 41	1 13	S.S.E. <sup>1</sup> / <sub>2</sub> E.	+ 0 18	0 55	
"	16 33	117 51	{ 1 38	E.S.E.	+ 0 55	0 43	} 0 30
			{ 1 12	E.S.E.	+ 0 55	0 17	
10.	15 11	119 38	0 50	S.E. <sup>b</sup> S.	+ 0 20	0 30	
16.	12 21	122 15	0 30	S.E. <sup>b</sup> E.	+ 0 35	0 5	
25.	9 38	123 40	1 25	S. <sup>1</sup> / <sub>2</sub> W.	- 0 5	1 30	
28.	7 36	121 46	1 37	S. <sup>1</sup> / <sub>2</sub> E.	+ 0 5	1 32	
30.	6 51	122 22	...	...	...	1 40	
Feb. 6.	6 50	122 38	...	...	...	1 27	Result of swinging on 22 points.
6.	6 37	123 4	{ 1 37	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 27	1 10	} 1 7
			{ 1 32	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 27	1 5	
7.	6 10	123 25	1 36	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 27	1 9	
			{ 2 15	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 27	1 48	} 1 54
8.	5 46	124 0	2 57	N.E.	+ 1 0	1 57	
			{ 1 20	N.N.W.	- 0 36	1 56	
9.	5 26	125 53	1 28	E. <sup>b</sup> S.	+ 0 40	0 48	
10.	4 38	127 4	1 47	S. <sup>b</sup> E. <sup>3</sup> / <sub>4</sub> E.	...	1 47	
12.	4 19	130 15	3 23	N. <sup>b</sup> W.	- 0 18	3 41	
14.	3 43	133 2	1 5	N.W. <sup>1</sup> / <sub>2</sub> W.	- 1 5	2 10	
15.	3 14	133 37	2 14	S.E.	+ 0 10	2 4	
16.	2 46	133 59	{ 3 14	N.E. <sup>b</sup> N.	+ 0 55	2 19	} 2 46
			{ 3 58	N.N.E. <sup>1</sup> / <sub>2</sub> E.	+ 0 45	3 13	
17.	2 59	134 46	2 0	S.E. <sup>3</sup> / <sub>4</sub> S.	+ 0 5	1 55	
"	2 34	134 59	2 26	S.E. <sup>b</sup> E.	+ 0 18	2 8	
18.	1 47	136 20	2 49	E. <sup>b</sup> S.	+ 0 40	2 9	
	SOUTH.						
21.	0 8	138 24	3 55	E. <sup>1</sup> / <sub>2</sub> N.	+ 0 57	2 58	
22.	0 36	138 55	2 49	N.N.W.	- 0 36	3 25	
"	0 54	139 19	3 10	E.S.E.	+ 0 30	2 40	
25.	2 9	141 36	4 41	E.N.E.	+ 1 5	3 36	
26.	2 2	142 13	4 55	N.E. <sup>b</sup> E.	+ 1 5	3 50	
"	1 57	142 39	4 44	E.N.E.	+ 1 5	3 39	
27.	2 1	143 41	3 47	E. <sup>b</sup> S.	+ 0 40	3 7	
28.	2 25	143 53	3 54	S.S.E.	...	3 54	
"	2 31	144 1	3 45	S.S.E.	...	3 45	
Mar. 1.	2 33	144 4	3 31	S.S.E.	...	3 31	
"	2 24	144 18	5 30	N.E. <sup>b</sup> E.	+ 1 5	4 25	
11.	0 42	146 59	4 53	S.E. <sup>b</sup> E.	+ 0 20	4 33	
	NORTH.						
12.	0 3	147 39	5 46	N.E.	+ 1 0	4 46	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	NORTH.	EAST.	EAST.			EAST.	
Mar. 12.	0° 21'	148° 7'	5° 52'	N.E.	+1° 0'	4° 52'	
13.	0 40	148 49	{ 6 0 5 55	N.E. E. <sup>h</sup> N. <sup>1</sup> / <sub>2</sub> N.	+1 0 +1 0	5 0 4 55	4 57
14.	0 50	148 6	{ 3 48 3 14	W. <sup>h</sup> N. W.N.W.	-1 0 -1 6	4 48 4 20	4 34
"	0 52	147 51	5 20	E. <sup>h</sup> N. <sup>1</sup> / <sub>2</sub> N.	+1 0	4 20	
15.	1 20	147 26	3 38	N.W. <sup>h</sup> N.	-0 52	4 30	
"	1 38	146 56	3 45	N.N.W. <sup>1</sup> / <sub>2</sub> W.	-0 45	4 30	
16.	2 15	146 16	5 4	E.N.E.	+1 0	4 4	
"	2 34	146 5	3 42	N. <sup>h</sup> W.	-0 18	4 0	
17.	3 10	145 37	3 29	N. <sup>h</sup> W.	-0 18	3 47	
"	3 33	145 30	4 29	N. <sup>1</sup> / <sub>2</sub> E.	+0 10	4 19	
18.	4 18	145 17	{ 4 19 2 41	N. <sup>1</sup> / <sub>2</sub> E. N.W. <sup>1</sup> / <sub>2</sub> N.	+0 15 -0 55	4 4 3 36	3 50
19.	5 33	145 14	{ 4 40 3 26	N.N.E. <sup>3</sup> / <sub>4</sub> E. N. <sup>1</sup> / <sub>4</sub> W.	+0 48 -0 10	3 52 3 36	3 46
20.	6 15	145 11	3 50	N.	...	3 50	
"	6 48	145 55	3 44	N.N.W.	-0 36	4 20	
21.	7 50	144 22	{ 3 0 5 1	N. <sup>h</sup> W. <sup>1</sup> / <sub>2</sub> W. N.E. <sup>1</sup> / <sub>2</sub> E.	-0 30 +1 5	3 30 3 56	3 38
22.	9 19	144 0	{ 3 21 3 27	N. <sup>1</sup> / <sub>4</sub> W. N. <sup>1</sup> / <sub>4</sub> W.	-0 5 -0 5	3 26 3 32	2 56
"	10 22	143 38	{ 2 56 2 10	N. <sup>1</sup> / <sub>4</sub> W. N.N.W.	-0 10 -0 36	3 6 2 46	2 19
23.	11 25	143 17	{ 2 11 2 12	N. <sup>1</sup> / <sub>4</sub> W. N.E. <sup>1</sup> / <sub>2</sub> E.	-0 10 +1 5	2 21 2 52	2 37
24.	12 46	142 52	{ 3 57 2 38	N. <sup>1</sup> / <sub>4</sub> W. N. <sup>h</sup> E.	-0 5 +0 15	2 17 2 23	2 40
"	13 40	142 38	{ 2 8 2 39	N.N.W. N. <sup>h</sup> W.	-0 36 -0 18	2 44 2 57	1 54
25.	14 44	142 14	{ 1 57 1 41	N. N. <sup>1</sup> / <sub>4</sub> W.	... -0 10	1 57 1 51	1 52
"	14 51	142 11	{ 2 49 2 0	N.E. <sup>h</sup> N. S. <sup>h</sup> E.	+1 0 +0 5	1 49 1 55	1 36
26.	16 4	141 49	{ 1 11 1 53	N. <sup>1</sup> / <sub>2</sub> W. N.	-0 25 ...	1 36 1 53	2 48
27.	17 35	141 20	{ 3 16 0 15	N. <sup>h</sup> W. N. <sup>h</sup> E.	-0 27 +0 25	3 43 0 10	0 41
28.	18 20	141 11	{ 2 16 1 24	N.E. <sup>1</sup> / <sub>2</sub> E. N. <sup>h</sup> E.	+1 15 +0 22	1 1 1 2	1 3
"	18 31	141 11	{ 1 17 1 40	N. <sup>h</sup> E. N. <sup>h</sup> E.	+0 22 +0 22	0 52 1 18	0 50
29.	19 12	141 15	{ 1 10 1 22	N. <sup>h</sup> E. N. <sup>h</sup> E.	+0 22 +0 22	0 48 1 0	0 42
"	19 37	141 15	{ 1 3 0 9	N. <sup>h</sup> E. N.	+0 22 ...	0 41 0 24	0 36

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	NORTH.	EAST.	WEST.			EAST.	
Mar. 30.	20 15	140 59	$\left\{ \begin{array}{l} 0^{\circ} 1' \\ 0 10 \\ \text{EAST.} \\ 0 9 \\ \text{WEST.} \\ 0 4 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.}^b\text{W.} \\ \text{N.}^b\text{W.} \\ \text{N.}^b\text{W.} \\ \text{N.}^b\text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} -0^{\circ} 25' \\ -0 25 \\ -0 25 \\ -0 25 \end{array} \right.$	$\left\{ \begin{array}{l} 0^{\circ} 24' \\ 0 15 \\ 0 31 \\ 0 21 \end{array} \right.$	0 23
31.	21 13	140 43	$\left\{ \begin{array}{l} 0 48 \\ 0 15 \\ 0 38 \\ \text{EAST.} \\ 0 16 \\ \text{WEST.} \\ 0 29 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.}^b\text{W.} \\ \text{N.}^b\text{W.} \\ \text{N.}^b\text{W.} \\ \text{S.E.}^b\text{E.} \\ \text{W.S.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -0 25 \\ -0 25 \\ -0 25 \\ +0 50 \\ -0 57 \end{array} \right.$	$\left\{ \begin{array}{l} 0 23 \\ 0 10 \\ 0 10 \\ 0 34 \\ 0 28 \end{array} \right.$	0 15
April 1.	22 1	140 28	$\left\{ \begin{array}{l} 0 25 \\ 1 48 \\ 0 48 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.} \\ \text{N.N.W.} \\ \text{N.N.W.} \end{array} \right.$	$\left\{ \begin{array}{l} \dots \\ -0 55 \\ -0 55 \end{array} \right.$	$\left\{ \begin{array}{l} 0 25 \\ 0 53 \\ 0 7 \end{array} \right.$	0 10
2.	22 29	139 30	$\left\{ \begin{array}{l} 1 59 \\ 2 4 \\ 2 55 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.N.W.} \\ \text{N.W.}^b\text{N.} \\ \text{N.W.} \end{array} \right.$	$\left\{ \begin{array}{l} -0 55 \\ -1 12 \\ -1 20 \end{array} \right.$	$\left\{ \begin{array}{l} 0 4 \\ 0 52 \\ 1 35 \end{array} \right.$	0 23
3.	24 44	138 37	$\left\{ \begin{array}{l} 0 41 \\ 0 57 \\ 3 25 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.N.W.} \\ \text{N.}^{\frac{1}{2}}\text{E.} \\ \text{W.}^b\text{N.}^{\frac{1}{2}}\text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} -0 51 \\ +0 6 \\ -1 36 \end{array} \right.$	$\left\{ \begin{array}{l} 0 10 \\ 1 3 \\ 1 49 \end{array} \right.$	0 28
4.	25 20	138 3	$\left\{ \begin{array}{l} 2 51 \\ 1 55 \\ 1 34 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.W.} \\ \text{N.} \\ \text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} -1 25 \\ \dots \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 1 26 \\ 1 55 \\ 1 34 \end{array} \right.$	0 42
„	25 48	137 51	$\left\{ \begin{array}{l} 2 40 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.}^b\text{W.} \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} -0 25 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 2 15 \\ 3 36 \end{array} \right.$	1 43
5.	26 29	137 59	$\left\{ \begin{array}{l} 1 55 \\ 1 34 \\ 2 40 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.} \\ \text{N.} \\ \text{N.}^b\text{W.} \end{array} \right.$	$\left\{ \begin{array}{l} \dots \\ \dots \\ -0 25 \end{array} \right.$	$\left\{ \begin{array}{l} 1 55 \\ 1 34 \\ 2 15 \end{array} \right.$	
6.	26 56	138 0	$\left\{ \begin{array}{l} 2 40 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.}^b\text{W.} \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} -0 25 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 2 15 \\ 3 36 \end{array} \right.$	
„	27 34	137 51	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} 3 36 \end{array} \right.$	
13.	35 25	139 42	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} \dots \end{array} \right.$	$\left\{ \begin{array}{l} 3 36 \end{array} \right.$	
June 22.	35 26	155 33	$\left\{ \begin{array}{l} 3 39 \\ 5 5 \\ 6 9 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.}^b\text{N.} \\ \text{E.}^b\text{N.} \\ \text{E.}^b\text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +2 18 \\ +1 55 \end{array} \right.$	$\left\{ \begin{array}{l} 1 21 \\ 2 47 \\ 4 14 \end{array} \right.$	
„	35 24	157 6	$\left\{ \begin{array}{l} 5 27 \\ 2 37 \\ 7 23 \end{array} \right.$	$\left\{ \begin{array}{l} \text{S.E.}^{\frac{3}{4}}\text{S.} \\ \text{S.W.}^{\frac{1}{4}}\text{S.} \\ \text{E.}^b\text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} +0 45 \\ -0 57 \\ +2 0 \end{array} \right.$	$\left\{ \begin{array}{l} 4 42 \\ 3 34 \\ 5 23 \end{array} \right.$	4 8
24.	35 36	160 7	$\left\{ \begin{array}{l} 7 53 \\ 3 31 \\ 6 40 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.}^b\text{S.} \\ \text{W.}^b\text{S.} \\ \text{N.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 0 \\ -2 5 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 5 53 \\ 5 36 \\ 6 40 \end{array} \right.$	
„	35 29	161 52	$\left\{ \begin{array}{l} 8 44 \\ 9 58 \\ 8 1 \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.}^b\text{S.}^{\frac{3}{4}}\text{S.} \\ \text{E.}^{\frac{1}{4}}\text{S.} \\ \text{S.} \end{array} \right.$	$\left\{ \begin{array}{l} +1 45 \\ +2 12 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 6 59 \\ 7 46 \\ 8 1 \end{array} \right.$	6 25
25.	35 24	163 48	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
„	35 20	165 12	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	8 24
26.	35 24	166 38	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
27.	35 22	168 54	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
28.	35 22	169 51	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
29.	35 35	171 29	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
„	36 4	172 10	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
30.	36 23	174 31	$\left\{ \begin{array}{l} 10 41 \\ 10 9 \\ 11 39 \end{array} \right.$	$\left\{ \begin{array}{l} \text{N.E.}^{\frac{1}{2}}\text{E.} \\ \text{N.N.E.}^{\frac{3}{4}}\text{E.} \\ \text{N.E.}^{\frac{1}{2}}\text{E.} \end{array} \right.$	$\left\{ \begin{array}{l} +2 18 \\ +1 45 \\ +2 21 \end{array} \right.$	$\left\{ \begin{array}{l} 8 23 \\ 8 24 \\ 9 18 \end{array} \right.$	
July 1.	36 13	175 33	$\left\{ \begin{array}{l} 11 47 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} \text{E.} \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} +2 27 \\ \dots \end{array} \right.$	$\left\{ \begin{array}{l} 9 20 \end{array} \right.$	

Result of swinging on 17 points.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	NORTH.	EAST.	EAST.			EAST.	
July 1.	36° 5'	176° 45'	12° 15'	E. $\frac{1}{2}$ S.	+ 2° 27'	9° 48'	
			11 10	S.E. $\frac{1}{2}$ S.	+ 0 55	10 55	
2.	36 10	178 12	13 12	E. $\frac{1}{2}$ S.	+ 2 24	10 48	10 49
			13 23	E. $\frac{1}{2}$ N.	+ 2 38	10 45	
3.	35 49	179 57	13 31	E.	+ 2 38	10 53	11 4
			13 56	E. $\frac{1}{2}$ N.	+ 2 40	11 16	
4.	36 34	180 0	13 52	N.E. $\frac{1}{2}$ E.	+ 2 35	11 17	11 15
			12 31	N.N.E.	+ 1 18	11 13	
		WEST.					
„	36 47	179 37	13 46	N.E. $\frac{1}{2}$ E.	+ 2 38	11 8	
5.	37 41	177 3.	8 2	W. $\frac{1}{2}$ S.	- 2 30	10 32	11 12
			10 31	N.N.W.	- 1 21	11 52	
„	37 49	176 50	14 59	N.E. $\frac{1}{2}$ E.	+ 2 49	12 12	
8.	37 46	168 31	16 15	E.N.E.	+ 2 54	13 21	
9.	37 49	166 48	10 56	N.W. $\frac{1}{2}$ W.	- 2 42	13 38	14 3
			11 25	W.N.W.	- 3 0	14 25	
10.	37 38	164 3	17 52	E. $\frac{1}{2}$ N.	+ 3 0	14 52	
„	37 37	163 26	13 57	S.S.W.	- 0 45	14 42	
„	37 40	163 5	17 29	E. $\frac{1}{2}$ N. $\frac{1}{2}$ N.	+ 3 5	14 24	
11.	37 41	162 6	16 57	E.	+ 3 5	13 52	
„	37 41	161 4	16 57	E.	+ 3 5	13 52	
12.	37 52	160 17	...	...	...	14 18	Result of swinging on 16 points.
„	37 54	160 7	17 36	E. $\frac{1}{2}$ N. $\frac{3}{4}$ N.	+ 3 10	14 26	
13.	37 56	157 49	17 48	N.E.	+ 2 38	15 10	
			14 13	S. $\frac{1}{2}$ W.	- 0 21	14 34	
14.	38 7	156 26	14 48	S. $\frac{1}{2}$ E.	+ 0 21	14 27	14 43
			16 2	S.E. $\frac{1}{2}$ S.	+ 1 6	14 56	
			17 13	E.S.E.	+ 2 18	14 55	
15.	37 29	155 43	15 26	S.E.	+ 1 32	13 54	
„	37 36	154 41	17 32	N.E. $\frac{1}{2}$ E.	+ 2 50	14 42	14 32
			12 49	S.W.	- 1 33	14 22	
16.	37 22	154 55	17 2	N.N.E.	+ 1 27	15 35	
			15 42	S.S.E.	+ 0 42	15 0	15 1
			15 10	S.S.E.	+ 0 42	14 28	
„	36 27	151 45	14 10	S.S.E.	+ 0 42	13 28	13 56
			15 7	S.S.E.	+ 0 42	14 25	
			11 10	W.N.W.	- 2 58	14 8	
17.	35 12	154 43	16 0	N.E. $\frac{1}{2}$ N.	+ 2 40	13 20	13 36
			14 25	S. $\frac{1}{2}$ E.	+ 0 20	14 5	
			13 14	S.S.E.	+ 0 40	12 34	
			14 30	S.S.E.	+ 0 40	13 50	
18.	34 16	155 1	12 7	S.W.	- 1 30	13 37	12 48
			10 35	N.N.W.	- 1 27	12 2	
„	34 16	154 51	13 41	S.S.E.	+ 0 40	13 1	13 25
			14 30	S.S.E.	+ 0 40	13 50	
19.	32 57	154 39	13 41	S.S.E.	+ 0 40	13 4	12 30
			12 36	S.S.E.	+ 0 40	11 56	
„	32 22	154 32	13 2	S.S.E.	+ 0 40	12 22	12 45
			13 48	S.S.E.	+ 0 40	13 8	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	NORTH.	WEST.	EAST.			EAST.	
July 20.	31 19	151 18	13 14	S.S.E.	+0 40	12 34	
"	30 40	151 35	11 13	S. <sup>b</sup> W.S.	-1 5	12 18	12 12
			11 20	S.S.W.	-0 45	12 5	
21.	30 22	151 55	11 31	S.	...	11 31	
			11 11	S.S.W.	-0 45	11 56	11 43
22.	29 19	151 41	12 0	S.S.E.	+0 38	11 22	
"	28 49	151 47	11 37	S. <sup>b</sup> E.	+0 20	11 17	
23.	27 51	151 53	10 58	S. <sup>b</sup> E.	+0 20	10 38	
"	27 33	151 57	10 56	S. <sup>b</sup> E.	+0 20	10 36	
			10 33	S. <sup>b</sup> E.	+0 20	10 13	
24.	26 31	155 5	9 43	S. <sup>1</sup> / <sub>2</sub> E.	+0 10	9 33	9 53
"	26 11	155 12	12 11	S.E. <sup>b</sup> E.	+1 42	10 29	
25.	25 10	155 29	9 38	S. <sup>3</sup> / <sub>4</sub> E.	+0 15	9 23	
"	24 7	155 43	9 36	S.	...	9 36	
26.	23 3	156 6	11 46	E. <sup>b</sup> N.	+2 35	9 11	
"	22 39	156 20	8 20	S. <sup>b</sup> W. <sup>1</sup> / <sub>2</sub> W.	-1 27	9 49	
Aug. 11.	21 14	157 53	...	...	...	8 47	...
							Result of swinging on 17 points.
20.	19 12	154 14	7 6	N. <sup>1</sup> / <sub>2</sub> E.	+0 18	6 48	
"	18 49	153 56	9 17	S.E.	+0 50	8 27	
21.	17 29	153 34	8 46	S.E. <sup>1</sup> / <sub>2</sub> E.	+0 55	7 51	
			7 48	S.E. <sup>1</sup> / <sub>2</sub> S.	+0 45	7 3	7 26
22.	15 58	153 10	8 34	S.E. <sup>1</sup> / <sub>2</sub> S.	+0 45	7 49	
"	15 17	152 50	6 53	S.E.	+0 50	6 3	5 55
			6 42	S.E. <sup>1</sup> / <sub>2</sub> E.	+0 55	5 17	
23.	14 19	152 36	9 29	N.E.	+1 50	7 39	7 23
			8 25	E.S.E.	+1 18	7 7	
24.	13 18	152 7	8 13	E.S.E.	+1 18	6 55	
25.	12 42	152 0	5 23	W.S.W.	-1 18	6 41	6 27
			6 58	S.E.	+0 45	6 13	
26.	11 28	152 2	6 24	S.	...	6 24	6 24
			6 29	S. <sup>1</sup> / <sub>2</sub> E.	+0 5	6 24	
"	11 5	152 4	8 17	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+1 10	7 7	6 46
			6 5	S.S.W.	-0 20	6 25	
27.	10 41	152 7	6 22	S. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+0 14	6 8	
"	10 20	151 33	6 49	S.E. <sup>b</sup> E.	+1 0	5 49	
28.	9 26	150 48	6 27	S. <sup>1</sup> / <sub>2</sub> E.	+0 5	6 22	6 24
			7 6	S.E.	+0 40	6 26	
30.	7 36	149 49	6 21	S. <sup>b</sup> W.	-0 10	6 31	6 17
			4 54	W.S.W.	-1 10	6 4	
Sept. 1.	6 53	147 9	5 20	S.	...	5 20	5 51
			5 50	S.W. <sup>1</sup> / <sub>2</sub> W.	-0 33	6 23	
2.	5 54	147 1	4 46	W.S.W.	-1 5	5 51	
3.	4 27	147 52	5 25	S. <sup>b</sup> W.	-0 7	5 32	4 46
			3 46	S.S.W.	-0 15	4 1	
"	3 32	148 21	5 5	S. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+0 24	4 41	
4.	2 34	149 8	7 12	E.N.E.	+1 47	5 25	5 19
			5 13	N.	...	5 13	
"	2 8	149 35	5 2	S.	...	5 2	4 51
			4 40	S.	...	4 40	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	NORTH.	WEST.	EAST.			EAST.	
Sept. 5.	1 2	150 34	{ 4 31 5 6 5 50 4 58	S. S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ W. S.	... + 0 5 - 0 5 ...	{ 4 31 5 1 5 55 4 58	{ 4 46 5 26
"	0 22	151 1					
	SOUTH.						
6.	0 34	151 34	{ 7 13 6 50 5 5 5 16	E. E. S. $\frac{1}{2}$ W. S. $\frac{1}{2}$ W.	+ 1 30 + 1 30 - 0 5 - 0 5	{ 5 43 5 20 5 10 5 21	{ 5 23
7.	1 52	152 21	{ 4 30 4 18 5 53 6 56	S. $\frac{1}{2}$ W. S. $\frac{1}{2}$ W. S. $\frac{1}{2}$ E. E. $\frac{1}{2}$ N.	- 0 8 + 0 14 + 0 5 + 1 36	{ 4 38 4 4 5 48 5 20	{ 4 56
"	2 54	152 44	{ 7 9 6 27 5 50 4 57	E. E. $\frac{1}{2}$ S. S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E. $\frac{1}{2}$ E.	+ 1 27 + 1 15 + 0 15 + 0 15	{ 5 42 5 12 5 35 4 42	{ 5 27
8.	3 48	152 56	{ 4 43 5 29 5 33 5 11	S. $\frac{1}{2}$ E. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E. S. E. S. E.	+ 0 20 + 0 15 + 0 26 + 0 26	{ 4 23 5 14 5 7 4 45	{ 4 58
9.	4 43	153 0	{ 5 26 5 47 7 20 4 54	S. E. S. E. E. N. E. S. $\frac{1}{2}$ E.	+ 0 26 + 0 26 + 1 30 + 0 10	{ 5 0 5 21 5 50 4 44	{ 4 56
10.	6 7	152 50	{ 5 11 5 26 5 47 7 20	S. E. S. E. S. E. E. N. E.	+ 0 26 + 0 26 + 0 26 + 1 30	{ 4 45 5 0 5 21 5 50	{ 5 10
"	6 38	152 29	{ 4 54 5 44 4 56 5 40	S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. E. $\frac{1}{2}$ S. S. E.	+ 0 20 + 0 20 + 0 22 + 0 22	{ 5 24 5 24 4 34 5 18	{ 5 19
11.	7 26	152 15	{ 7 53 6 8 5 58 6 51	S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. S. E. $\frac{1}{2}$ S.	+ 1 24 + 0 9 + 0 21 + 0 15	{ 6 29 5 59 5 37 6 36	{ 6 14
13.	10 24	150 36	{ 6 14 6 54 6 36 7 20	S. $\frac{1}{2}$ S. S. $\frac{1}{2}$ W. S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E.	+ 0 15 - 0 4 ... ...	{ 5 59 6 58 6 36 7 20	{ 6 18
14.	11 1	150 33	{ 6 54 6 36 7 20 6 5	S. $\frac{1}{2}$ W. S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E.	- 0 4 ... ... ...	{ 6 58 6 36 7 20 6 5	{ 6 47
"	11 22	150 29	{ 7 11 8 29 8 49 10 8	S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N.	+ 0 5 - 0 5 - 0 10 + 0 12	{ 7 16 7 24 8 59 9 56	{ 6 42
15.	12 0	150 17	{ 8 29 8 33 8 37 8 44	E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. S. $\frac{1}{2}$ E. $\frac{1}{2}$ N. E. $\frac{1}{2}$ S. $\frac{1}{2}$ S.	+ 1 5 ... ... + 0 5	{ 7 24 8 33 8 37 8 39	{ 7 20
16.	12 33	149 58					
17.	13 30	149 32					
18.	14 57	149 40					
19.	15 51	149 41					
Oct. 3.	17 38	149 42	...	...	...	7 51 ...	Result of swinging on 16 points.
5.	20 38	150 11	7 42	S. $\frac{1}{2}$ E.	0	7 42	
"	21 22	150 16	7 17	S. $\frac{1}{2}$ E.	- 0 5	7 22	
6.	22 24	150 16	9 5	S. $\frac{1}{2}$ E. $\frac{1}{2}$ N.	- 0 7	9 12	
7.	23 18	150 4	8 49	S. $\frac{1}{2}$ E.	- 0 10	8 59	Rolling heavily.
"	23 46	149 59	10 8	S. $\frac{1}{2}$ W. $\frac{1}{2}$ S.	+ 0 12	9 56	
8.	21 40	148 10	8 33	S. $\frac{1}{2}$ E.	...	8 33	
"	25 13	147 19	8 37	S. $\frac{1}{2}$ E. $\frac{1}{2}$ N.	...	8 37	
9.	26 0	145 21	8 44	E. $\frac{1}{2}$ S. $\frac{1}{2}$ S.	+ 0 5	8 39	Rolling heavily.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	SOUTH.	WEST.	EAST.			EAST.	
Oct. 10.	27 26	143 14	9 7	S.E. <sup>b</sup> E.	...	9 7	8 56
"	27 53	142 14	8 45	S.E. <sup>b</sup> E.	...	8 45	
"	27 53	142 14	8 56	E.S.E.	...	8 56	
11.	28 25	141 19	8 47	S.W. <sup>b</sup> W. <sup>1</sup> W.	+0 5	8 42	8 38
"	28 25	141 19	9 19	S.W.	+0 10	9 9	
"	28 25	141 19	7 50	S.E.	-0 12	8 2	
12.	29 12	140 34	9 3	S.E.	-0 12	9 15	9 26
"	29 12	140 34	9 25	S.E.	-0 12	9 37	
"	29 39	140 4	9 23	S.E.	-0 12	9 35	
13.	30 44	139 18	10 11	S.E.	-0 12	10 23	9 25
"	31 20	138 45	9 4	S.E.	-0 12	9 16	
15.	33 7	135 34	11 26	E.N.E.	+0 40	10 46	
"	33 10	134 32	10 36	N.E. <sup>b</sup> E.	+0 45	9 51	11 10
"	33 10	134 32	9 15	E. <sup>b</sup> S.	+0 15	9 0	
16.	33 29	133 22	11 1	S.W.	+0 6	10 55	
"	33 29	133 22	11 26	N.	...	11 26	9 41
"	33 35	133 5	9 18	E. <sup>b</sup> S.	+0 15	9 3	
"	33 35	133 5	10 35	E. <sup>b</sup> S.	+0 15	10 20	
17.	34 3	131 32	11 47	S.W. <sup>1</sup> W.	+0 5	11 42	10 38
"	34 25	131 57	10 38	S. <sup>1</sup> W.	...	10 38	
18.	35 41	132 26	9 27	S. <sup>b</sup> E. <sup>2</sup> E.	-0 12	9 39	
"	36 12	132 26	11 40	S. <sup>1</sup> E.	-0 5	11 45	11 12
19.	36 32	132 52	10 57	S.E. <sup>b</sup> S.	-0 15	11 12	
"	37 6	133 5	9 43	S. <sup>1</sup> E.	-0 7	9 50	
21.	40 3	132 58	12 43	S.E.	-0 12	12 55	11 31
22.	39 56	131 26	12 16	N.E. <sup>1</sup> N.	+0 45	11 31	
23.	39 41	131 23	10 23	S. <sup>b</sup> W.	-0 5	10 28	
24.	39 31	128 27	10 30	E. <sup>b</sup> N. <sup>1</sup> N.	+0 45	11 15	12 14
"	39 25	126 36	13 30	E. <sup>b</sup> N.	+0 40	12 50	
25.	39 17	124 33	12 16	E. <sup>b</sup> N. <sup>1</sup> N.	+0 45	11 31	
"	39 16	124 7	13 0	E. <sup>b</sup> S.	+0 18	12 42	12 31
"	39 16	123 41	12 49	E. <sup>b</sup> S.	+0 18	12 31	
26.	39 13	120 21	13 4	E.N.E.	+0 50	12 14	
27.	39 13	118 50	13 30	S.W. <sup>1</sup> S.	...	13 30	13 54
"	39 13	118 50	14 6	W.S.W.	-0 12	14 18	
"	39 13	118 31	12 53	E.N.E.	+0 50	12 3	
28.	38 57	115 12	13 35	E.	+0 30	13 5	13 0
"	38 57	115 12	13 36	E. <sup>b</sup> N.	+0 42	12 54	
29.	38 49	113 28	13 36	E. <sup>b</sup> N. <sup>1</sup> N.	+0 42	12 54	
"	38 43	112 31	15 0	S.	-0 5	15 5	15 8
"	38 43	112 31	15 6	S.	-0 5	15 11	
30.	38 44	110 32	14 41	E. <sup>b</sup> N.	+0 45	13 56	
31.	38 52	107 10	15 41	E. <sup>b</sup> N.	+0 45	14 56	14 26
"	38 52	107 10	14 43	E.	+0 30	14 13	
"	38 52	107 10	16 19	W.N.W.	-0 40	16 59	
Nov. 1.	39 4	105 5	16 46	N.W. <sup>b</sup> W. <sup>1</sup> W.	-0 42	17 28	17 14
2.	39 19	100 26	17 19	E.N.E.	+0 50	16 29	
3.	39 22	98 46	19 8	N. <sup>b</sup> E.	+0 26	18 42	
"	39 14	98 16	20 16	N. <sup>1</sup> W.	-0 5	20 21	19 31
"	39 14	98 16	18 11	N.E. <sup>1</sup> E.	+0 55	17 56	
4.	38 38	95 52	18 6	N.E. <sup>b</sup> E. <sup>1</sup> E.	+0 50	17 16	
5.	38 15	94 29	18 59	N.E. <sup>1</sup> E.	+0 50	18 9	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.	SOUTH.	WEST.	EAST.			EAST.	
Nov. 5.	38° 7'	94° 3'	18° 9'	N.E. $\frac{1}{2}$ E.	+ 0 50'	17° 19'	
6.	37 51	93 52	{ 19 54 18 26	N. $\frac{1}{2}$ E. N. $\frac{1}{2}$ E.	+ 0 25 + 0 20	19 29 18 6	18 47
7.	37 25	93 49	{ 18 11 19 11	N. $\frac{1}{2}$ W. N.N.W. $\frac{1}{2}$ W.	- 0 12 - 0 32	18 23 19 43	19 3
„	37 28	93 15	16 58	E. $\frac{3}{4}$ N.	+ 0 21	16 37	
8.	37 56	91 35	18 31	E.	+ 0 40	17 51	
„	37 50	89 51	18 24	E.N.E.	+ 0 50	17 34	
9.	38 6	88 2	{ 19 24 20 3	N. $\frac{1}{2}$ E. N. $\frac{1}{2}$ E.	+ 0 27 + 0 20	18 57 19 43	19 20
„	38 6	87 37	19 4	N.E. $\frac{1}{2}$ E. $\frac{1}{2}$ E.	+ 0 55	18 9	
10.	38 13	85 7	22 17	E. $\frac{1}{2}$ N.	+ 0 40	21 37	
„	38 18	84 8	{ 19 24 18 49	E. $\frac{1}{2}$ N. N.N.E.	+ 0 40 + 0 40	18 44 18 9	18 26
11.	37 23	83 1	19 41	N.N.E.	+ 0 40	19 1	
13.	34 28	79 47	17 10	N. $\frac{1}{2}$ E. $\frac{1}{2}$ E.	+ 0 30	16 40	
17.	33 53	73 52	16 25	N. $\frac{1}{2}$ W. $\frac{1}{4}$ W.	- 0 20	16 45	
Dec. 11.	33 1	71 37	...	...	...	15 7	Result of swinging on 17 points.
12.	32 42	74 8	{ 14 54 16 44	W. $\frac{1}{2}$ S. N.W.	- 0 27 - 0 40	15 21 17 24	16 22
„	32 53	74 15	15 0	S. $\frac{1}{4}$ E.	- 0 15	15 15	
13.	33 22	74 24	{ 14 44 14 43	N.W. $\frac{1}{2}$ N. S.S.E. $\frac{1}{2}$ E.	- 0 35 - 0 22	15 19 15 5	15 12
„	33 45	74 16	{ 15 17 15 43	S.E. $\frac{1}{2}$ S. S.E. $\frac{1}{2}$ E.	- 0 40 - 0 40	15 57 16 23	16 10
14.	33 31	74 43	{ 16 1 16 11	N. $\frac{1}{2}$ W. $\frac{1}{4}$ W. S. $\frac{1}{2}$ S.W.	... - 0 5	16 1 16 16	16 9
15.	33 15	76 12	{ 15 57 17 37	W. $\frac{1}{2}$ S. S.W. $\frac{1}{2}$ W.	- 0 20 - 0 10	16 17 17 47	17 2
„	33 1	76 47	15 9	N.W. $\frac{1}{2}$ W.	- 0 40	15 49	
16.	32 53	77 0	{ 16 9 16 20	S. S. $\frac{1}{2}$ E. $\frac{1}{4}$ E.	- 0 14 - 0 20	16 23 16 40	16 31
„	33 16	77 18	16 23	S. $\frac{1}{2}$ W.	- 0 10	16 33	
17.	33 42	78 18	{ 16 19 17 22	S. $\frac{1}{2}$ E. S. $\frac{1}{2}$ E.	- 0 21 - 0 18	16 40 17 40	17 10
18.	34 20	78 44	16 33	S.W. $\frac{3}{4}$ W.	- 0 10	16 43	
21.	37 11	82 53	18 31	E. $\frac{3}{4}$ S.	+ 0 20	18 11	
22.	37 26	83 58	{ 18 41 18 54	E. $\frac{1}{2}$ N. S.W. $\frac{1}{4}$ W.	+ 0 38 - 0 6	18 6 19 0	18 33
„	37 54	83 52	{ 18 5 17 20	S.E. S.E. $\frac{1}{2}$ S.	- 0 20 - 0 20	18 25 17 40	18 2
23.	38 43	83 43	{ 18 44 18 58	S.E. $\frac{1}{2}$ S. S.E. $\frac{1}{2}$ S.	- 0 20 - 0 20	19 4 19 18	19 11
24.	39 43	85 37	19 24	S.W. $\frac{1}{2}$ S.	- 0 5	19 29	
„	39 47	86 13	18 1	S.W. $\frac{1}{2}$ S.	- 0 5	18 6	
25.	40 30	89 7	20 36	S.W. $\frac{1}{2}$ S.	- 0 5	20 41	
„	40 37	89 50	20 18	E.S.E.	...	20 18	
27.	42 27	83 49	19 51	E. $\frac{1}{4}$ N.	+ 0 30	19 21	
28.	42 43	82 11	{ 19 57 19 47	S.S.W. E. $\frac{1}{4}$ S.	... + 0 22	19 57 19 25	19 41

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1875.							
Dec. 29.	43 27	79 40	18 37	S.E.	- 0 21	18 58	
30.	44 48	78 40	19 27	S.S.E. $\frac{3}{4}$ S.	- 0 21	19 48	
1876.							
Jan. 20.	52 21	67 39	18 54	N.E. $\frac{1}{2}$ E.	+ 0 45	18 9	
21.	51 37	65 40	17 53	N. $\frac{1}{2}$ E.	+ 0 25	17 28	17 6
"	51 26	64 32	16 28	N.N.W.	- 0 7	16 35	
"	51 18	64 12	16 55	E.	+ 0 15	16 40	
"	51 18	64 12	17 4	E.N.E.	+ 0 40	16 24	
Feb. 4.	51 34	57 52	...	...	...	13 44	Result of swinging on 19 points.
7.	51 6	56 29	13 19	N.W.	+ 0 5	13 14	
"	50 10	56 9	11 45	N.N.W.	...	11 15	
8.	48 50	55 44	11 54	N.E.	+ 0 27	11 27	
9.	48 24	56 8	11 13	N.N.W.	...	11 13	11 22
"	48 24	56 8	11 30	N.N.W. $\frac{1}{4}$ W.	...	11 30	
"	48 24	56 8	11 33	N.N.W.	...	11 33	
"	48 24	56 8	11 1	N.N.W.	...	11 1	
10.	46 0	56 9	11 1	N.N.W.	...	11 1	11 17
"	44 48	56 14	9 47	N.N.W.	...	9 47	
11.	42 55	56 36	9 57	N.N.W.	- 0 5	10 2	
"	42 31	56 29	10 47	N.W.	- 0 15	11 2	
"	42 31	56 29	9 32	N.	+ 0 15	9 17	10 9
12.	41 53	54 46	9 2	N.N.W. $\frac{1}{2}$ W.	- 0 10	9 12	
"	41 53	54 46	9 19	N.N.W. $\frac{1}{2}$ W.	- 0 10	9 29	
"	41 25	54 28	7 59	N. $\frac{1}{2}$ E.	+ 0 18	7 41	
13.	39 49	54 26	7 9	N.W.	...	7 9	
"	38 29	54 5	6 47	N. $\frac{1}{4}$ W.	+ 0 10	6 37	6 48
"	38 29	54 5	7 15	N.	+ 0 15	7 0	
14.	37 32	53 56	7 5	N. $\frac{1}{2}$ E.	+ 0 20	6 45	
"	36 36	54 6	6 30	N.W. $\frac{3}{4}$ W.	- 0 5	6 35	
"	36 36	54 6	6 26	N.N.W.	- 0 8	6 34	6 34
25.	34 59	56 11	...	...	...	8 1	Result of swinging on 18 points.
26.	35 20	53 41	7 37	E.S.E.	+ 0 12	7 25	
27.	35 35	51 35	5 58	E. $\frac{1}{2}$ S.	+ 0 33	5 25	5 2
"	35 35	51 35	5 15	E. $\frac{1}{2}$ S.	+ 0 36	4 39	
28.	35 38	50 40	4 10	N.N.W. $\frac{1}{2}$ W.	- 0 24	4 34	
"	35 38	50 40	4 1	S.E. $\frac{1}{2}$ E.	+ 0 5	3 56	
29.	36 8	48 25	4 0	E. $\frac{1}{4}$ N.	+ 0 45	3 15	3 1
"	36 8	48 25	3 3	S.E. $\frac{1}{2}$ E.	+ 0 15	2 48	
"	36 8	48 25	2 37	S.E. $\frac{1}{2}$ E.	+ 0 5	2 32	
"	36 8	48 4	2 41	S.S.E.	- 0 15	2 26	
"	36 8	48 4	2 39	N.E.	+ 1 5	1 34	2 11
Mar. 1.	35 58	47 48	1 52	S.W. $\frac{1}{2}$ S.	- 0 15	2 7	
"	36 10	47 3	1 16	S.E. $\frac{1}{2}$ S.	- 0 10	1 26	
"	36 10	47 3	2 26	N.E. $\frac{1}{2}$ N.	+ 1 5	1 21	
2.	36 45	46 14	1 18	N.W.	- 0 48	2 6	1 50
"	36 45	46 14	1 18	N.W.	- 0 5	1 23	
"	36 45	46 14	3 0	E. $\frac{1}{2}$ S.	+ 0 30	2 30	
"	36 45	46 14	3 0	E. $\frac{1}{2}$ S.	+ 0 30	2 30	
5.	37 34	41 31	WEST. 1 20	E. $\frac{3}{4}$ N.	+ 0 50	2 10	1 59
"	37 34	41 31	1 18	E'S.	+ 0 30	1 48	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation of Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1876.	SOUTH.	WEST.	WEST.			WEST.	
Mar. 6.	37° 36'	40° 28'	2° 55'	E. $\frac{1}{2}$ N.	+1° 0'	3° 55'	
"	37 39	39 6	3 4	E. $\frac{1}{2}$ N.	+0 50	3 54	
7.	37 31	36 50	6 11	E. $\frac{1}{2}$ S.	+0 20	6 31	
"	37 31	35 57	6 18	W.	-0 45	5 33	5 52
"			5 39	E. $\frac{1}{2}$ S.	+0 33	6 12	
8.	37 43	33 52	9 18	E. $\frac{1}{2}$ S.	+0 33	9 51	8 33
"			7 8	S.E. $\frac{1}{2}$ E.	+0 8	7 16	
"	37 44	32 49	8 23	N. $\frac{1}{2}$ W.	-0 3	8 30	8 13
"			7 21	E. $\frac{3}{4}$ S.	+0 36	7 57	
9.	37 46	30 56	9 59	E. $\frac{1}{2}$ S.	+0 36	10 35	10 4
"			9 23	S.E. $\frac{1}{2}$ E.	+0 10	9 33	
"	37 47	30 17	9 40	N. $\frac{1}{2}$ W. $\frac{1}{2}$ W.	-0 10	9 30	
13.	35 36	21 4	18 36	N.W. $\frac{1}{2}$ N.	-0 40	17 56	18 13
"			18 7	E.S.E.	+0 23	18 30	
14.	35 45	18 31	18 36	S.E.	...	18 36	
"			18 53	S.W. $\frac{1}{2}$ W.	-0 30	18 23	19 3
"			18 59	E.N.E.	+1 10	20 9	
15.	34 38	16 34	20 33	N.E. $\frac{1}{2}$ E.	+1 12	21 45	
"	33 41	15 7	20 28	E. $\frac{1}{2}$ N.	+1 10	21 38	
16.	32 32	13 17	21 41	E.N.E.	+1 10	22 51	23 0
"			23 35	N.N.W. $\frac{1}{2}$ W.	-0 27	23 8	
"	32 15	13 2	22 29	N. $\frac{1}{2}$ E.	+0 42	23 11	
17.	30 48	13 10	20 58	N. $\frac{1}{2}$ E.	+0 42	21 40	22 48
"			23 14	N.N.E.	+0 42	23 56	
"	29 51	13 12	22 34	N.N.E.	+0 50	23 24	
"			23 7	N.N.E.	+0 50	23 57	
19.	25 1	13 37	22 23	N.N.E.	+0 50	23 13	23 58
"			23 47	N.N.E.	+0 50	24 37	
"			22 50	N.N.E.	+0 50	23 40	
20.	23 46	13 50	22 11	N.N.E.	+0 50	23 1	24 10
"			24 58	N.N.E.	+0 50	25 48	
20.	22 49	14 4	22 38	N.N.E. $\frac{1}{2}$ E.	+0 55	23 33	23 55
"			23 17	N.N.E. $\frac{1}{2}$ E.	+1 0	24 17	
"			22 54	N.N.E. $\frac{1}{2}$ E.	+1 0	23 54	
"	21 26	14 1	23 5	N.N.E. $\frac{1}{2}$ E.	+1 0	24 5	24 22
"			24 8	N.N.E. $\frac{1}{2}$ E.	+1 0	25 8	
"	21 15	14 4	23 30	E. $\frac{1}{2}$ S.	+0 36	24 6	24 23
"			24 23	S.E. $\frac{1}{2}$ E.	+0 18	24 41	
22.	19 55	13 59	22 58	N.N.E. $\frac{3}{4}$ E.	+1 3	24 1	
"	19 13	13 59	22 49	N.E. $\frac{1}{2}$ N.	+1 5	24 54	
23.	17 36	13 55	23 24	N.E. $\frac{1}{2}$ N.	+1 10	21 34	23 51
"			21 58	N.E. $\frac{1}{2}$ N.	+1 10	23 8	
"	16 55	13 49	22 46	N.E. $\frac{1}{2}$ N.	+1 10	23 56	
24.	15 14	13 46	22 42	N.E. $\frac{1}{2}$ N.	+1 10	23 52	23 40
"			22 19	N.E. $\frac{1}{2}$ N.	+1 10	23 29	
"	14 33	13 42	22 40	N.N.E. $\frac{1}{2}$ E.	+1 5	23 45	
25.	12 51	13 46	22 36	N.N.E. $\frac{1}{2}$ E.	+1 5	23 41	23 31
"			22 17	N.N.E. $\frac{1}{2}$ E.	+1 5	23 22	
"	12 11	13 46	23 3	N.N.E. $\frac{1}{2}$ E.	+1 5	24 8	
26.	10 40	13 44	22 5	N.N.E. $\frac{1}{2}$ E.	+1 5	23 10	
"	9 43	13 51	22 47	S.S.E. $\frac{1}{2}$ E.	-0 10	22 57	
27.	8 27	11 13	22 25	N. $\frac{1}{2}$ E.	+0 38	23 3	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1876.	SOUTH.	WEST.	WEST.			WEST.	
Mar. 27.	8° 19'	14° 18'	22° 32'	N. $\frac{1}{2}$ W.	+ 0° 5'	22° 37'	
April 3.	7 51	14 27	...	...	...	22 41	Result of swinging on 16 points.
"	7 37	14 26	22 37	N. N. E. $\frac{1}{2}$ E.	+ 1 5	23 42	
4.	6 27	14 26	21 23	N. N. E. $\frac{3}{4}$ E.	+ 1 8	22 31	
"	5 41	14 27	21 42	N. N. E. $\frac{1}{2}$ E.	+ 1 8	22 50	
"	5 41	14 27	21 35	N. N. E. $\frac{1}{2}$ E.	+ 1 8	22 43	
"	5 41	14 27	22 41	N. N. E. $\frac{1}{2}$ E.	+ 1 5	23 46	
5.	4 39	14 31	21 45	N. N. E. $\frac{1}{2}$ E.	+ 1 5	22 50	
"	3 45	14 37	20 52	N. N. E. $\frac{1}{2}$ E.	+ 1 5	21 57	
"	3 45	14 37	21 11	N. E. $\frac{1}{2}$ N.	+ 1 15	22 26	
6.	2 41	14 40	21 17	N. E. $\frac{1}{2}$ N.	+ 1 15	22 32	
"	2 41	14 40	21 43	E. S. E.	+ 0 40	22 23	
"	2 41	14 40	20 52	N. E. $\frac{1}{2}$ N.	+ 1 15	22 7	
7.	1 3	14 32	20 31	N. E. $\frac{1}{2}$ N.	+ 1 15	21 46	
"	0 15	14 25	21 53	N. E. $\frac{1}{2}$ N.	+ 1 15	23 8	
"	0 15	14 25	21 16	E. $\frac{1}{2}$ S.	+ 0 54	22 10	
8.	1 14	14 6	20 45	N. E. $\frac{1}{2}$ N.	+ 1 15	22 0	
"	2 0	14 19	21 7	N. $\frac{1}{2}$ W.	+ 0 10	21 17	
9.	3 10	14 51	21 45	N.	+ 0 15	22 0	
"	3 30	14 52	20 44	S. E. $\frac{1}{2}$ E.	+ 0 22	21 6	
"	3 30	14 52	20 51	N. N. E.	+ 0 57	21 48	
10.	5 38	14 40	21 6	N. N. E.	+ 0 57	22 3	
"	5 38	14 40	21 14	N.	+ 0 14	21 28	
11.	7 7	15 6	21 4	N.	+ 0 14	21 18	
"	7 39	15 23	21 15	N.	+ 0 14	21 29	
"	7 39	15 23	21 58	N. N. W.	- 0 33	21 25	
12.	8 45	16 19	21 29	N. N. W.	- 0 33	20 56	
"	8 45	16 19	21 12	N. N. W.	- 0 33	20 39	
"	9 18	16 48	21 31	N. N. W.	- 0 33	20 58	
13.	10 20	17 44	21 22	N. N. W.	- 0 33	20 49	
"	10 20	17 44	21 18	N. N. W.	- 0 33	20 45	
"	11 0	17 52	20 26	N. $\frac{1}{2}$ E.	+ 0 40	21 6	
"	11 0	17 52	19 46	N. N. E. $\frac{1}{2}$ E.	+ 1 8	20 54	
14.	11 16	18 12	22 10	N. W.	- 1 12	20 58	
"	11 16	18 12	21 39	N. W.	- 1 12	20 27	
"	11 16	18 12	22 33	N. W. $\frac{1}{2}$ N.	- 1 5	21 28	
15.	12 0	21 0	21 20	N. W. $\frac{1}{2}$ N.	- 0 56	20 24	
"	12 33	21 39	20 45	N. N. W.	- 0 33	20 12	
"	12 33	21 39	20 38	N. $\frac{1}{2}$ W.	+ 0 5	20 43	
16.	13 42	22 49	21 32	N. N. W. $\frac{1}{2}$ W.	- 0 48	20 44	
"	13 42	22 49	22 20	N. N. W. $\frac{1}{2}$ W.	- 0 48	21 32	
"	14 31	23 40	18 1	E. N. E.	+ 1 45	19 46	
18.	16 11	24 17	21 57	N. N. W. $\frac{1}{2}$ W.	- 0 50	21 7	
19.	16 54	25 5	...	...	...	19 54	Result of swinging on 17 points.
27.	17 16	26 19	21 44	W. $\frac{1}{2}$ N. $\frac{1}{2}$ N.	- 1 40	20 4	
28.	17 46	28 18	20 26	N. W. $\frac{1}{2}$ N.	- 1 18	19 8	

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
1876.	NORTH.	WEST.	WEST.			WEST.	
	° ' "	° ' "	° ' "			° ' "	
April 29.	18 2	29 54	{ 21 47 20 48 18 45	N.W. <sup>1</sup> / <sub>2</sub> N. N.W. <sup>1</sup> / <sub>2</sub> N. N.	-1 6 -1 20 +0 15	20 41 19 28 19 0	19 53
30.	19 17	30 32	{ 18 6 18 45	N.N.E. N.N.E.	+1 9 +1 9	19 15 19 54	19 35
"	20 5	30 36	18 17	N.N.E.	+1 9	19 26	
May 1.	21 23	31 11	{ 19 41 18 31 19 18	N. <sup>1</sup> / <sub>2</sub> W. N. <sup>1</sup> / <sub>2</sub> W. N. <sup>1</sup> / <sub>2</sub> W.	... ... ...	19 41 18 31 19 18	19 6
"	22 12	31 34	{ 19 50 18 56	N. <sup>1</sup> / <sub>2</sub> W. N.	-0 20 +0 15	19 30 19 11	19 24
2.	23 24	32 25	{ 17 49 19 36	N. N.	+0 15 +0 15	18 4 19 51	18 37
"	24 22	32 49	{ 19 14 19 23	N. <sup>1</sup> / <sub>2</sub> E. N. <sup>1</sup> / <sub>2</sub> E.	+0 36 +0 45	19 50 20 8	19 50
3.	25 53	33 29	{ 18 56 17 54	N. <sup>1</sup> / <sub>2</sub> E. E. <sup>1</sup> / <sub>2</sub> S.	+0 45 +1 30	19 41 19 24	19 54
"	26 21	33 37	{ 21 35 18 54	N. <sup>1</sup> / <sub>2</sub> W. N.W. <sup>1</sup> / <sub>2</sub> W.	-0 20 -1 36	21 15 17 18	19 17
4.	27 40	34 37	{ 20 53 21 5	N. <sup>1</sup> / <sub>2</sub> W. N. <sup>1</sup> / <sub>2</sub> W.	... -0 20	20 53 20 45	20 49
"	28 29	35 12	{ 21 29 20 15	N. <sup>1</sup> / <sub>2</sub> W. N. <sup>1</sup> / <sub>2</sub> E.	+0 10 +0 46	21 39 21 1	21 20
5.	29 45	36 0	{ 20 28 20 20	N.N.E. N.N.E.	+1 15 +1 15	21 43 21 35	21 39
"	30 37	36 12	{ 20 54 21 30	N.N.E. N.N.E.	+1 15 +1 15	22 9 22 45	22 27
6.	32 1	36 10	{ 19 30 20 31	N.E. <sup>1</sup> / <sub>2</sub> E. N.E. <sup>1</sup> / <sub>2</sub> E.	+2 0 +2 0	21 30 22 31	
"	32 43	36 5	20 59	E. <sup>1</sup> / <sub>2</sub> N.	+2 6	23 5	
7.	34 7	34 38	{ 22 28 22 17	N. <sup>1</sup> / <sub>2</sub> E. N.N.E.	+1 9 +1 15	23 37 23 32	23 35
"	34 39	33 55	{ 24 12 23 12	N. <sup>1</sup> / <sub>2</sub> E. N.E. <sup>1</sup> / <sub>2</sub> N.	+0 45 +1 36	24 57 24 48	
8.	35 32	33 21	{ 23 31 23 3	N.E. <sup>1</sup> / <sub>2</sub> N. E.N.E.	+1 36 +1 57	25 7 25 0	24 56
"	36 20	33 36	{ 23 53 21 4	N.E. <sup>1</sup> / <sub>2</sub> E. N.E.	+2 5 +2 0	25 58 26 4	26 1
9.	37 40	33 50	{ 25 28 25 30	N.N.E. <sup>1</sup> / <sub>2</sub> E. N.E. <sup>1</sup> / <sub>2</sub> N.	+1 36 +1 45	27 4 27 15	27 9
"	38 33	33 32	{ 23 22 24 1	E. <sup>1</sup> / <sub>2</sub> N. E. <sup>1</sup> / <sub>2</sub> N.	+2 20 +2 15	25 42 26 16	25 59
10.	39 54	32 11	{ 23 19 25 42	E. <sup>1</sup> / <sub>2</sub> N. S.E. <sup>1</sup> / <sub>2</sub> S.	+2 30 +0 40	25 49 26 22	
"	40 52	31 58	{ 23 54 24 57	E.S.E. E. <sup>1</sup> / <sub>2</sub> N.	+1 40 +2 30	25 34 27 27	26 30
11.	41 38	31 45	{ 23 44 23 22	E.S.E. E. <sup>1</sup> / <sub>2</sub> N.	+1 40 +2 30	25 24 25 52	25 39
"	42 15	30 50	{ 24 30 22 51	E. <sup>1</sup> / <sub>2</sub> S. E.S.E.	+2 10 +1 45	26 40 24 36	
12.	42 44	28 31	{ 22 9 22 17	E. <sup>1</sup> / <sub>2</sub> S. E. <sup>1</sup> / <sub>2</sub> N.	+1 50 +2 30	23 59 24 47	
13.	42 37	27 19					
14.	42 52	25 31					
"	43 0	24 43					
15.	42 27	22 21					
16.	42 0	21 10					
"	42 4	20 11					

Lurching heavily.

Date.	Geographical Position.		Variation Observed.	Correction.		Mean Variation or Declination.	REMARKS.
	Latitude.	Longitude.		Ship's Head.	Deviation.		
	NORTH.	WEST.	WEST.			WEST.	
1876.							
May 17.	42° 7'	18° 43'	21° 21'	E. $\frac{1}{2}$ S. $\frac{1}{4}$ S.	+ 2° 0'	23° 21'	
„	42 11	17 27	20 20	E. $\frac{1}{2}$ N.	+ 2 27	22 47	
18.	42 32	15 35	20 59	E. $\frac{1}{2}$ N. $\frac{1}{4}$ N.	+ 2 36	23 35	
„	42 49	14 43	20 27	E. $\frac{1}{4}$ N.	+ 2 25	22 52	
22.	43 38	9 42	{ 18 46 18 37	{ N.E. $\frac{1}{4}$ N. N.E. $\frac{1}{4}$ N.	{ + 2 22 + 2 22	21 9 } 21 4	

## VI. ABSTRACT of OBSERVATIONS with FOX CIRCLES made

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A/H.	$\frac{1}{d}$ .	Dip.
1872. Oct. 20.	NORTH. 51° 28.1'	WEST. 0° 18.8'	NORTH. 68° 11'	-0° 19'	...	...	...	...	...	NORTH. 67° 52'
"	"	"	68 16	-0 24	...	...	...	...	...	67 52
1873. *July 3.	"	"	67 59	-0 8	...	...	...	...	...	67 51
4.	"	"	67 53	-0 2	...	...	...	...	...	67 51

\* The circle C. 13 A., which was examined at Kew Observatory on this date, was sent to the "Challenger" at St Vincent, Cape de Verde islands.

during the Voyage of H.M.S. Challenger, 1872-76.

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	36° 49'					Kew Observatory.	1872. Oct. 20.
S.	43 38						
N. & S.	60 17						
Gr. 3.0	56 48						
2.5	44 57						
2.0	34 15					I. 27 needle A.	
1.5	24 31						
1.0	16 18	...	...	...	10.274		
Def. N.	36 15					I. 27 needle B.	"
S.	44 18						
Gr. 3.0	61 23						
2.5	46 42						
2.0	35 36						
1.5	25 32					C. 13 needle A.	
1.0	16 35	...	...	...	10.274		
Def. N.	32 13					C. 13 needle B.	1873. July 3.
S.	33 23						
N. & S.	50 30						
Gr. 3.0	58 10						
2.5	44 22						
2.0	34 1					C. 13 needle A.	
1.5	24 37						
1.0	16 1	...	...	...	10.285		
Def. N.	31 47					C. 13 needle B.	4.
S.	33 35						
N. & S.	50 24						
Gr. 3.0	57 40						
2.5	45 29						
2.0	34 39					C. 13 needle B.	
1.5	25 28						
1.0	16 52	...	...	...	10.285		

Geographical Position.			Inclination or Dip ( $\theta$ ).							
Date.	Latitude.	Longitude.	$\theta$ .	Index Correction	Ship's Head.	Correction.	Mean N.	$\frac{R}{\sin \theta}$ .	$\frac{1}{\theta}$ .	Dip.
1872.	NORTH.	EAST.	NORTH.							NORTH.
Dec. 4-6.	51° 26' 2"	0° 43' 7"	62° 5'	-0° 30'	N.	+2° 11'	+63° 46'			
			62° 30'	-0° 30'	N.N.E.	+1° 52'	+63° 52'			
			63° 8'	-0° 30'	N.E.	+1° 35'	+64° 13'			
			64° 13'	-0° 30'	E.N.E.	+0° 37'	+64° 20'			
			65° 1'	-0° 30'	E.	-0° 20'	+64° 11'			
			66° 25'	-0° 30'	S.E.	-1° 49'	+64° 6'			
			66° 18'	-0° 30'	S. 29° E.	-2° 07'	+63° 41'			
			66° 30'	-0° 30'	S. 1° E.	-2° 19'	+63° 41'			
			66° 0'	-0° 30'	S. 31° W.	-2° 0'	+63° 30'			
			66° 35'	-0° 30'	S.W.	-1° 55'	+64° 10'			
			65° 0'	-0° 30'	W.S.W.	-1° 9'	+63° 21'			
			64° 37'	-0° 30'	W.	-0° 20'	+63° 47'			
			62° 42'	-0° 30'	N.W.	+1° 41'	+63° 53'			
			61° 51'	-0° 30'	N.N.W.	+2° 5'	+63° 26'			
					N.		+63° 51'	+3° 10'	+0° 38'	67° 39'
					N.N.E.					
					N.E.					
					E.N.E.					
					E.					
					S.E.					
					S. 29° E.					
					S. 1° E.					
					S. 31° W.					
					S.W.					
					W.S.W.					
					W.					
					N.W.					
					N.N.W.					
		WEST.								
Dec. 22.	49° 41'	4° 44'	64° 5'	-0° 18'	W. b. s.	-0° 44'	+63° 3'	+3° 20'	+0° 39'	67° 2'
25.	49° 28'	8° 23'	62° 3'	-0° 18'	N.W.	+1° 14'	+62° 59'	+3° 20'	+0° 39'	66° 58'
26.	48° 2'	9° 20'	63° 19'	-0° 18'	W.	-0° 18'	+62° 43'	+3° 23'	+0° 39'	66° 45'
29.	43° 55'	10° 4'	61° 58'	-0° 18'	S. 1° E.	-2° 11'	+59° 29'	+3° 48'	+0° 40'	63° 57'
30.	41° 55'	9° 40'	58° 43'	-0° 14'	S.E.	-1° 50'	+56° 39'	+4° 17'	+0° 44'	61° 40'
31.	41° 44'	9° 48'	59° 44'	-0° 14'	S.S.W.	-2° 10'	+57° 20'	+4° 0'	+0° 44'	62° 4'
1873.										
Jan. 2.	40° 4'	10° 5'	58° 26'	-0° 22'	S.S.E.	-2° 2'	+56° 2'	+4° 4'	+0° 45'	60° 51'
5.	38° 41' 8"	9° 9' 6"	55° 19'	-0° 19'	W. 1/2 N.	+0° 10'				
			55° 11'	-0° 10'	W.	0° 0'	+55° 15'	+4° 14'	+0° 45'	60° 14'
			56° 24'	-0° 10'	E. 1/2 S.	-0° 40'				

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	39 37	9.10	...	+ 1.10	10.20	Swinging at Sheerness. Mounted L. 27 needle A.  10.28.	1872. Dec. 4-6.
N.	39 57	8.98	...	+ 1.13	10.11		
N.	39 58	8.98	...	+ 1.17	10.15		
N.	40 7	8.92	...	+ 1.28	10.20		
N.	40 17	8.85	...	+ 1.38	10.23		
N.	40 23	8.82	...	+ 1.52	10.34		
N.	40 47	8.67	...	+ 1.57	10.24		
N.	40 36	8.74	...	+ 1.58	10.32		
N.	40 52	8.64	...	+ 1.56	10.20		
N.	40 25	8.82	...	+ 1.53	10.35		
N.	40 30	8.78	...	+ 1.46	10.24		
N.	40 26	8.84	...	+ 1.38	10.22		
N.	39 22	9.19	...	+ 1.17	10.36		
N.	39 38	9.10	...	+ 1.11	10.21		
S.	46 35	9.24	...	+ 1.10	10.34		
S.	47 7	9.09	...	+ 1.13	10.22		
S.	47 0	9.12	...	+ 1.17	10.29		
S.	47 29	8.98	...	+ 1.28	10.26		
S.	47 45	8.90	...	+ 1.38	10.28		
S.	47 56	8.86	...	+ 1.52	10.38		
S.	48 12	8.76	...	+ 1.57	10.33		
S.	48 0	8.83	...	+ 1.58	10.41		
S.	48 25	8.71	...	+ 1.56	10.27		
S.	47 47	8.89	...	+ 1.53	10.42		
S.	47 45	8.90	...	+ 1.46	10.36		
S.	47 25	9.00	...	+ 1.38	10.38		
S.	46 56	9.15	...	+ 1.17	10.32		
S.	46 45	9.19	...	+ 1.11	10.30		
S.	47 20	9.02	9.02	+ 1.40	10.42	Pitching and rolling heavily. (Face west only observed.)	Dec. 22.
N.	39 27	9.11	9.14	+ 1.14	10.28	Great deal of motion.	25.
S.	46 51	9.17					
N.	40 17	8.87	8.87	+ 1.35	10.22	" "	26.
N.	41 16	8.51	8.54	+ 1.50	10.04	" "	29.
S.	48 55	8.57					
N.	41 20	8.48	8.49	+ 1.44	9.93		30.
S.	49 5	8.51					
N.	41 28	8.43	8.50	+ 1.45	9.95		31.
S.	48 55	8.57					
N.	41 51	8.30	8.41	+ 1.42	9.83		1873. Jan. 2.
S.	49 2	8.53					
N.	41 32	8.40	8.48	+ 1.15	9.63	At anchor, Lisbon.	5.
S.	48 55	8.57					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{\rho}$ .	Dip.
1873. Jan. 6.	NORTH. 38° 43' 2"	WEST. 9° 8' 3"	NORTH. 59° 38'	-0° 10'	...	...	...	...	...	NORTH. 59° 28'
14.	38 16	9 48	55 53	-0 12	s.w., <sup>1</sup> w.	-1 3	+54 38	+4 20	+0 45	59 43
15.	37 6	9 24	53 58	...	s.e.	-1 50	+52 8	+4 44	+0 47	57 39
16.	36 25	8 12	53 2	+0 3	s.e.	-1 50	+51 15	+4 55	+0 47	56 57
17.	35 55	7 1	52 26	+0 4	s.e., <sup>1</sup> e.	-1 26	+51 4	+4 58	+0 47	56 49
21.	36 8.4	5 20.4	56 23	+0 5	...	...	...	...	...	56 28
26.	36 8	5 17	49 2 50 22 52 42 52 28 52 15 52 46 49 59 49 18	+0 4 +0 4 +0 4 +0 4 +0 4 +0 4 +0 4 +0 4	N. N.E. E. S.E. S. S.W. W. N.W.	+1 54 +1 21 0 0 -1 39 -1 51 -1 2 0 0 +1 13	+51 10	+4 46	+0 48	56 44
					N.					
					E.					
					W.					
					N.W.					
					N.					
					E.					
					W.					
27.	35 40	6 11	52 30	+0 3	w.s.w.	-0 38	+51 55	+4 37	+0 48	57 20
28.	35 44	8 14	51 21	+0 3	N.W., <sup>1</sup> w.	+1 9	+52 33	+1 30	+0 47	57 50

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.	
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.			
Def. N. 38° 20'		...	...	...	9.645	Lisbon, Magnetic Observatory.	1873. Jan. 6.	
S. 45 12								
N. & S. 62 22								
Grs. 2.5 50 34								
2.0 38 17								
1.5 28 3								
1.0 18 32								
Def. N. 41 43		8.35	8.52	+ 1.23	9.75		14.	
S. 49 18		8.95						
Grs. 2.0 46 21		8.25						
Def. N. 41 52		8.29	8.30	+ 1.32	9.62		15.	
S. 49 25		8.42						
Grs. 2.0 46 21		8.25						
1.5 32 58		8.25						
Def. N. 42 12		8.18	8.27	+ 1.32	9.59		16.	
S. 49 31		8.40						
Grs. 1.5 33 49		8.24						
Def. N. 42 14		8.17	8.11	+ 1.27	9.38		17.	
S. 50 1		8.25						
Grs. 2.0 47 36		8.08						
1.5 34 52		8.06						
1.0 22 13		8.06						
Def. N. 38 46		...	...	...	9.446	Neutral Ground, Gibraltar.	21.	
S. 45 40								
N. & S. 63 13								
Grs. 2.0 39 7								
1.5 29 12								
1.0 18 49								
Def. N. 39 55		8.99	...	+ 0.80	9.31	Swinging off Gibraltar.	26.	
N. 42 2		8.25	...	+ 0.89				
N. 42 40		8.05	...	+ 1.10				
N. 43 7		7.93	...	+ 1.32				
N. 42 51		8.01	...	+ 1.37				
N. 43 15		7.89	...	+ 1.26				
N. 42 27		8.12	...	+ 1.10				
N. 41 45		8.37	...	+ 0.90				
S. 48 35		8.66	...	+ 0.80				
S. 49 45		8.32	...	+ 1.10				
S. 49 41		8.34	...	+ 1.10				
Def. S. 49 45		8.32	8.32	+ 1.20	9.52		27.	
N. 41 50		8.30	8.40	+ 0.92	9.32	Great deal of motion.	28.	
S. 49 7		8.51						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{\delta}$ .	Dip.
1873.	NORTH.	WEST.	NORTH.							NORTH.
Jan. 29.	36° 13'	10° 12'	52° 35'	+0° 3'	N.W. <sup>b</sup> W.	+0° 57'	+53° 40'	+4° 18'	+0° 46'	58° 44'
30.	36 23	11 18	54 30	+0 2	W. <sup>b</sup> S.	-0 27	+54 5	+4 14	+0 46	59 5
31.	35 20	13 5	53 21	+0 2	W. <sup>b</sup> S.	-0 27	+52 56	+4 28	+0 46	58 10
Feb. 1.	34 7	14 15	52 23	+0 2	W.S.W.	-0 40	+51 45	+4 40	+0 47	57 12
2.	32 38	15 55	52 7	+0 1	W. <sup>b</sup> S. <sub>2</sub> S.	-0 50	+51 18	+4 44	+0 47	56 49
"	32 38	15 55	50 22	+0 1	N.E. <sup>b</sup> E.	+1 4	+51 27	+4 42	+0 47	56 56
"	32 31	16 14	51 2	+0 1	W. <sup>b</sup> S. <sub>3</sub> S.	-0 43	+50 20	+5 0	+0 48	56 8
4-5.	32 37	16 54	48 28	...	N.	+1 54	+51 1	+4 48	+0 47	56 36
			50 16	...	N.E.	+1 21				
			53 15	...	E.	-0 0				
			52 13	...	S.E.	-1 39				
			50 57	...	S.W.	-1 2				
			50 56	...	W.	-0 0				
			49 18	...	N.W.	+1 13				
					N.					
					N.E.					
					N.E.					
					N.E.					
6.	30 0	17 0	50 21	-0 1	S. <sup>b</sup> E.	-1 51	+49 59	+4 57	+0 48	55 44
10.	28 40	16 0	43 37	-0 2	N.	+1 54	+45 29	+5 45	+0 50	52 4
11.	28 20	17 30	45 7	-0 3	W.N.W.	-0 36	+44 28	+5 57	+0 50	51 15
12.	28 0	17 30	44 30	-0 4	N.E.	+1 21	+45 47	+5 43	+0 50	52 20
14.	28 28.4	16 14.3	46 58	-0 5	E. <sub>1</sub> N.	-0 40	+46 13	+5 39	+0 50	52 42

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.			
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.					
Def. s.	41 22	8.46	8.44	+ 0.95	9.39	Great deal of motion.	1873.			
s.	48 45	8.61								
Grs. 1.5	32 44	8.52								
1.0	22 0	8.14	8.25	+ 1.15	9.40					
Def. s.	42 30	8.10								
s.	49 30	8.40								
Grs. 1.5	33 25	8.36	8.28	+ 1.15	9.43					
1.0	21 37	8.28								
Def. s.	41 57	8.26								
s.	49 50	8.30	8.24	+ 1.20	9.44					
Grs. 1.5	34 2	8.23								
1.0	22 57	7.80								
Def. s.	42 36	8.07	8.24	+ 1.20	9.44	Feb. 1.				
s.	49 31	8.40								
Grs. 1.5	33 55	8.25								
1.0	21 55	8.17	8.26	+ 1.15	9.41					
Def. s.	42 12	8.18								
s.	49 45	8.32								
Grs. 1.5	34 57	8.18	8.26	+ 1.15	9.41					
1.0	22 27	8.38								
...	...	...	...	...	...		"			
...	...	...	...	...	...		"			
Def. s.	40 35	8.74	...	+ 0.80	9.49	Swinging off Madeira.	4-5.			
s.	40 52	8.64	...	+ 0.89						
s.	41 19	8.49	...	+ 1.10						
s.	42 11	8.18	...	+ 1.32						
s.	42 34	8.06	...	+ 1.26						
s.	41 48	8.31	...	+ 1.10						
s.	41 2	8.62	...	+ 0.90						
s.	48 7	8.79	...	+ 0.80						
s.	48 10	8.78	...	+ 0.89						
Grs. 1.5	31 45	8.76	...	+ 0.89						
1.0	21 7	8.47	...	+ 0.89						
Def. s.	43 32	7.82	7.89	+ 1.36	9.25	At anchor—Teneriffe.	6.			
s.	50 58	7.96								
s.	41 30	8.40					8.40	+ 0.80	9.20	10.
s.	43 15	7.89					7.89	+ 1.20	9.09	11.
s.	42 0	8.28					8.28	+ 0.89	9.17	12.
s.	12 30	8.10	8.13	+ 1.10	9.23					
s.	50 0	8.25								
Grs. 1.5	35 0	8.03								

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{\delta}$ .	Dip.
1873. Feb. 14.	NORTH. $28^{\circ} 28'$	WEST. $16^{\circ} 14'$	NORTH. $54^{\circ} 52'$	$+0^{\circ} 26'$	...	...	...	...	...	NORTH. $55^{\circ} 18'$
15.	27 22	16 57	46 22 46 15 46 50 45 52 46 0 44 57 ... ... ...	- 0 4 - 0 4 + 0 26 + 0 26 + 0 26 + 0 26 ... ... ...	S. E.S.E. S.S.E. S. E. $\frac{1}{4}$ S. E. $\frac{1}{4}$ N. E. S. $\frac{1}{2}$ E. $\frac{1}{2}$ E. E. $\frac{3}{4}$ S.	- 1 6 - 1 5 - 1 6 - 1 6 - 0 42 - 0 35	+ 45 23	+ 5 50	+ 0 50	52 6
16.	26 46	17 37	44 57	+ 0 26	w. <sup>b</sup> s.	- 0 47	+ 44 36	+ 6 0	+ 0 50	51 26
"	26 34	18 9	44 56	+ 0 25	w.	- 0 41	+ 44 40	+ 6 0	+ 0 50	51 30
17.	25 52	19 14	44 28	+ 0 24	w.	- 0 41	+ 44 11	+ 6 3	+ 0 50	51 4
18.	25 45	20 12	45 40	- 0 4	w.	- 0 41	+ 44 55	+ 6 1	+ 0 50	51 46
19.	25 28	20 12	45 11	+ 0 22	w.	- 0 41	+ 44 52	+ 6 1	+ 0 50	51 43
20.	24 59	21 28	44 23	+ 0 21	w. <sup>b</sup> N.	- 0 29	+ 44 15	+ 6 3	+ 0 50	51 8
21.	24 24	24 3	44 37	+ 0 21	w. <sup>b</sup> N.	- 0 29	+ 44 29	+ 6 2	+ 0 50	51 21
22.	24 18	25 34	46 0	+ 0 20	w. <sup>b</sup> N.	- 0 29	+ 45 51	+ 5 46	+ 0 50	52 27
23.	23 20	27 31	46 8	+ 0 20	w. $\frac{1}{2}$ N.	- 0 37	+ 45 51	+ 5 46	+ 0 50	52 27
24.	23 7	30 30	46 56	+ 0 19	N.w. <sup>b</sup> w. $\frac{1}{2}$ w.	- 0 8	+ 47 7	+ 5 17	+ 0 49	53 13
25.	23 12	32 56	47 30	- 0 4	N.w. <sup>b</sup> w. $\frac{1}{2}$ w.	- 0 8	+ 47 18	+ 5 14	+ 0 49	53 21
26.	23 23	35 10	50 7	+ 0 19	S.E.	- 1 16	+ 49 10	+ 5 6	+ 0 49	55 5

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.					
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.							
Def. N.	38 18	...	...	...	9.546	Teneriffe.	1873. Feb. 11.					
S.	45 48											
N. & S.	62 52											
Grs. 1.5	29 0											
1.0	18 56											
							15.					
...	...	...	...	...	...	Face E. only observed.						
Grs. 2.0	48 40	7.95	7.95	+1.10	9.05							
Def. N.	44 6	7.68	7.68	+1.35	9.03							
S.	44 20	7.63	7.59	+1.10	8.69							
Grs. 1.0	22 59	7.55										
Def. N.	43 32	7.82	7.93	+1.15	9.08	Mounted needle B.	16.					
S.	50 43	8.04										
...	...	...	...	...	...		"					
N.	43 30	7.82	7.83	+1.10	8.93							
Grs. 1.5	36 45	7.69			" " A.	17.						
1.0	23 0	7.97										
...	...	...	...	...	...	Face E. only observed.	18.					
Def. N.	43 0	7.95	8.00	+1.10	9.10			19.				
S.	50 37	8.06										
N.	42 22	8.11	8.25	+1.05	9.30		20.					
S.	49 30	8.40										
N.	42 30	8.10	8.19	+1.05	9.24		21.					
S.	50 5	8.23										
Grs. 1.5	35 0	8.03										
1.0	21 45	8.40										
Def. N.	43 22	7.83	7.86	+1.05	8.91		22.					
S.	50 30	8.10										
Grs. 1.5	36 0	7.84										
1.0	24 0	7.65										
Def. N.	42 58	7.95						8.06	+1.08	9.14		23.
S.	50 0	8.25										
N. & S.	70 20	7.88	8.27	+1.00	9.27		24.					
Grs. 1.5	34 14	8.17										
Def. N.	41 58	8.24	8.61	+1.00	9.61		25.					
S.	49 5	8.52										
Grs. 1.0	22 44	8.05				26.						
Def. N.	40 25	8.82										
S.	49 30	8.40	8.37	+1.32	9.69							
N.	41 42	8.35										
S.	49 35	8.38										

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1873.	NORTH.	WEST.	NORTH.							NORTH.
Feb. 27.	23° 25'	36° 10'	49° 59'	+ 0 18'	w N.W.	- 0° 17'	+ 50° 0'	+ 4 35	+ 0 48	54° 23'
28.	23 28	38 57	51 13	+ 0 18	w. $\frac{1}{2}$ N.	- 0 35	+ 49 56	+ 4 37	+ 0 48	55 22
Mar. 1.	22 45	40 37	51 23	+ 0 18	s.	- 1 6	+ 50 35	+ 4 30	+ 0 48	55 53
"	22 45	40 37	50 13	+ 0 18	E.	- 0 42	+ 49 49	+ 4 36	+ 0 48	55 13
2.	22 30	41 56	50 31	+ 0 18	w. $\frac{1}{2}$ N.	- 0 29	+ 50 20	+ 4 30	+ 0 48	55 38
3.	22 28	42 20	51 7	+ 0 18	w. $\frac{1}{2}$ s.	- 0 47	+ 50 38	+ 4 26	+ 0 48	55 52
	21 57	43 29	51 16	+ 0 18	w. $\frac{1}{2}$ s.	- 0 47	+ 50 4	+ 4 34	+ 0 48	55 26
			51 7	+ 0 18	E.	- 0 42				
			49 0	+ 0 18	N.E.	+ 0 26				
			48 7	+ 0 18	N.	+ 1 2				
			48 51	+ 0 18	N.W.	+ 0 15				
			50 45	+ 0 18	w.	- 0 41				
5.	21 2	46 25	50 19	+ 0 17	w.	- 0 41	+ 49 55	+ 4 30	+ 0 48	55 13
6.	20 40	48 25	50 2	+ 0 17	w. $\frac{1}{2}$ N.	- 0 34	+ 49 45	+ 4 24	+ 0 49	54 58
7.	20 39	50 20	50 9	+ 0 16	w. $\frac{1}{2}$ N.	- 0 34	+ 49 51	+ 4 23	+ 0 49	55 4
"	20 39	50 33	49 54	- 0 7	w. $\frac{1}{2}$ s.	- 0 45	+ 49 2	+ 4 31	+ 0 49	54 42
8.	20 13	52 6	49 10	+ 0 16	w. $\frac{1}{2}$ s.	- 0 45	+ 48 41	+ 4 36	+ 0 49	54 6
"	20 9	52 14	49 12	+ 0 7	w. $\frac{1}{2}$ s.	- 0 45	+ 49 34	+ 4 24	+ 0 49	54 47
9.	19 57	53 55	46 58	+ 0 16	w.	- 0 41	+ 46 32	+ 4 54	+ 0 50	52 16
10.	19 41	55 13	47 46	+ 0 15	w.	- 0 41	+ 47 20	+ 4 52	+ 0 50	53 2
11.	19 20	57 15	46 58	+ 0 15	w. $\frac{1}{2}$ s.	- 0 45	+ 46 28	+ 4 55	+ 0 51	52 14
12.	19 18	57 30	47 4	+ 0 7	w. $\frac{1}{2}$ s.	- 0 45	+ 46 26	+ 4 55	+ 0 51	52 12
	18 56	59 35	46 0	- 0 7	w.	- 0 41	+ 45 12	+ 5 0	+ 0 51	51 3

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. s.	40 26	8.82	8.71	+ 1.00	9.71		1873.
s.	48 47	8.60					
s.	39 45	9.03					
s.	48 0	8.83					
...	...	...	...	...	...		Feb. 27.
...	...	...	8.93	+ 1.08	10.01		28.
...	...	...					
...	...	...					
...	...	...					
...	...	...	8.85	+ 1.15	10.00		Mar. 1.
s.	40 18	8.85					
s.	40 30	8.78					
s.	48 0	8.83					
...	...	...	8.77	+ 1.07	9.84		"
...	...	...					
...	...	...					
...	...	...					
...	...	...	8.66	+ 1.20	9.86		2.
...	...	...					
...	...	...					
...	...	...					
...	...	...	...	...	...		"
...	...	...	...	...	...		3.
Def. s.	40 20	8.84	8.60	+ 1.15	9.75		5.
s.	48 40	8.64					
...	...	...					
...	...	...					
...	...	...	9.14	+ 1.08	10.22		6.
...	...	...					
...	...	...					
...	...	...					
...	...	...	8.96	+ 1.15	10.11	Rolling and pitching heavily.	7
...	...	...					
...	...	...					
...	...	...					
...	...	...	8.95	+ 1.22	10.17		"
...	...	...					
...	...	...					
...	...	...					
...	...	...	9.09	+ 1.22	10.31		8.
...	...	...					
...	...	...					
...	...	...					
...	...	...	...	...	...	Mounted circle C. 9 needle C. Rolling heavily.	"
...	...	...					
...	...	...					
...	...	...					
...	...	...	9.04	+ 1.20	10.24	Mounted circle I. 27 needle A.	9.
...	...	...					
...	...	...					
...	...	...					
...	...	...	9.17	+ 1.22	10.39		10.
...	...	...					
...	...	...					
...	...	...					
...	...	...	9.09	+ 1.20	10.29	Mounted circle C. 9 needle C. Mounted circle I. 27 needle A. Face E. only observed.	"
...	...	...					
...	...	...					
...	...	...					
...	...	...	...	...	...		12.
...	...	...					
...	...	...					
...	...	...					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1873. Mar. 13.	NORTH. $18^{\circ} 54'$	WEST. $61^{\circ} 28'$	NORTH. $45^{\circ} 3'$	$+0^{\circ} 14'$	w.	$-0^{\circ} 41'$	$+44^{\circ} 36'$	$+5^{\circ} 7'$	$+0^{\circ} 52'$	NORTH. $50^{\circ} 35'$
15.	18 40	63 20	41 59	$+0 14$	N.W.	$+0 15$	$+42 28$	$+5 23$	$+0 52$	48 43
16.	18 17	65 0	42 5	$-0 7$	N.W.	$+0 15$	$+42 34$	$+5 22$	$+0 52$	48 48
17.	18 20	64 55	48 57	$+0 13$	...	...	...	...	...	49 10
18.	18 20	64 55	49 3	$+0 7$	...	...	...	...	...	49 10
22.	18 20	64 56	44 7	$+0 13$	E. <sup>bs</sup> .	$-0 53$	$+43 27$	$+5 10$	$+0 52$	48 29
„	18 17	65 0	41 42	$+0 13$	N.	$+1 2$	$+42 46$	$+5 23$	$+0 52$	49 1
			41 44	$+0 13$	N.E.	$+0 26$				
			43 6	$+0 13$	E.	$-0 42$				
			43 45	$+0 13$	S.E.	$-1 6$				
			44 26	$+0 13$	S.	$-1 6$				
			43 22	$+0 13$	S.W.	$-0 57$				
			43 33	$+0 13$	W.	$-0 41$				
			42 41	$+0 13$	N.W.	$+0 15$				
22-24.	18 17	65 0	42 50	$+0 7$	N.E.	$+0 26$	$+43 1$	$+5 16$	$+0 52$	49 9
			43 21	$+0 7$	E.	$-0 42$				
			44 43	$+0 7$	S.	$-1 6$				
			44 13	$+0 7$	S.W.	$-0 57$				
			42 45	$+0 7$	W.	$-0 41$				
			42 15	$+0 7$	N.W. S.W.	$+0 15$				
27.	21 21	65 12	47 34	$+0 7$	N. <sub>2</sub> E.	$+1 20$	$+49 1$	$+4 17$	$+0 49$	54 7
28.	22 57	65 16	48 32	$+0 6$	N. <sub>2</sub> E.	$+1 23$	$+50 1$	$+4 20$	$+0 49$	55 10

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. s.	40 3	8.93	9.08	+ 1.20	10.28		1873.
s.	17 0	9.12					
Grs. 1.5	31 0	8.91					Mar. 13.
	1.0	19 30	9.32				
Def. s.	39 42	9.02	9.20	+ 0.92	10.12		15.
s.	46 7	9.39					
s.	39 0	9.31					16.
	46 0	9.43	9.37	+ 0.92	10.29		
s.	37 16	...	...	...	10.199	St Thomas island.	17.
s.	43 47						
N. & S.	59 51						
Grs. 1.5	26 48						
1.0	17 46						
Def. s.	36 3	...	...	...	10.199	Mounted circle C. 9 needle C.	18.
N. & S.	51 50						
Grs. 1.5	24 9						
...	...	...	...	...	...	Mounted circle I. 27 needle A. At anchor—Gregerie Channel, St Thomas island.	22.
Def. s.	38 30	9.52	...	+ 0.71	10.21	Swinging off St Thomas island.	"
s.	38 43	9.43	...	+ 0.87			
s.	39 27	9.13	...	+ 1.18			
s.	40 13	8.90	...	+ 1.36			
s.	40 22	8.82	...	+ 1.38			
s.	39 48	9.03	...	+ 1.18			
s.	40 38	8.74	...	+ 1.31			
s.	39 6	9.27	...	+ 0.90			
						Mounted circle C. 9 needle C.	
N.	36 51	9.19	...	+ 0.87	9.87	Swinging. Rejected in favour of I. 27 A.	"
N.	37 39	8.86	...	+ 1.18			
N.	38 54	8.36	...	+ 1.38			
N.	38 38	8.48	...	+ 1.31			
N.	37 51	8.74	...	+ 1.18			
N.	37 51	8.74	...	+ 0.90			
N. & S.	55 46	8.41	...	+ 1.31			
s.	37 40	9.88	9.97	+ 0.73	10.70	Mounted circle I. 27 needle A.	27.
s.	44 16	10.07					
Grs. 1.5	27 30	9.96					
Def. s.	37 12	10.09	10.40	+ 0.73	11.13		28.
s.	41 1	11.33					
Grs. 1.5	28 1	9.79					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A/H.	$\frac{1}{\sigma}$ .	Dip.
1873.	NORTH.	WEST.	NORTH.							NORTH.
Mar. 30.	26° 13'	65° 20'	52° 59'	+0° 4'	N. <sup>b</sup> E.	+1° 33'	+54° 36'	+3° 47'	+0° 49'	59° 12'
April 1.	29 4	65 1	56 39	+0 1	N.	+1 43	+58 23	+3 15	+0 45	62 33
2.	29 42	65 7	57 6	0 0	N.	+1 45	+58 51	+3 15	+0 45	62 51
„	29 48	65 27	56 43	-0 1	N.	+1 45	+58 27	+3 15	+0 45	62 27
3.	32 0	64 59	59 41	-0 2	N. <sup>b</sup> E.	+1 50	+61 29	+3 0	+0 41	65 10
6.	32 19	64 51	62 4	-0 2	N.W. <sup>1</sup> / <sub>2</sub> W.	+1 8	+63 10	+2 40	+0 39	66 29
„	32 19	64 51	65 26	-0 2	S. <sup>b</sup> W. <sup>1</sup> / <sub>4</sub> W.	-1 38	+63 46	+2 38	+0 39	67 3
8.	32 18	64 53	65 46	-0 2	...	...	...	...	...	65 14
42.	32 18	64 49	67 22	-0 2	...	...	...	...	...	67 20
22.	32 0	65 9	63 6	-0 3	S. <sup>b</sup> E.	-1 40	+61 23	+3 0	+0 41	65 4
24.	32 19	65 39	62 27	-0 3	S.S.W.	-1 38	+60 46	+3 7	+0 42	64 35
25.	32 20	66 55	60 30	-0 4	N.W. <sup>1</sup> / <sub>2</sub> W.	+1 26	+61 52	+3 2	+0 40	65 34
27.	34 0	67 28	65 28	-0 5	S.W. <sup>b</sup> W. <sup>1</sup> / <sub>2</sub> W.	-0 58	+64 25	+2 33	+0 39	67 37
28.	34 44	68 25	63 1	-0 5	N.W. <sup>b</sup> W.	+0 56	+63 52	+2 40	+0 39	67 11
May 2.	37 23	71 40	65 48	-0 7	N.E. <sup>b</sup> N.	+1 31	+67 12	+2 9	+0 32	69 53
3.	38 38	72 14	67 45	-0 35	W.N.W.	+0 34	+67 44	+2 8	+0 31	70 23
4.	39 8	71 35	69 3	-0 8	E. <sup>b</sup> N. <sup>1</sup> / <sub>2</sub> S.	+0 22	+69 17	+2 0	+0 31	71 48
5.	39 42	69 22	67 56	-0 9	N.E.	+1 14	+69 1	+2 0	+0 31	71 33
7.	44 40	65 20	69 51	-0 9	N.E.	+1 14	+70 56	+1 46	+0 28	73 10
8.	43 2	64 2	73 18	-0 10	S.E. <sup>3</sup> / <sub>4</sub> E.	-1 4	+72 4	+1 46	+0 27	74 16
„	43 8	63 56	70 22	-0 10	N.E. <sup>1</sup> / <sub>4</sub> N.	+1 23	+71 35	+1 53	+0 27	73 54

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Belt-tors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1873.
Def. N.	36 25	10.44	10.55	+ 0.98	11.53		Mar. 30.
s.	42 35	10.68					
Grs. 1.5	25 55	10.52	10.80	+ 1.06	11.86		April 1.
Def. N.	35 31	10.89					
s.	42 30	10.71	10.91	+ 1.10	12.01		2.
N.	35 17	11.00					
s.	42 10	10.83	10.98	+ 1.10	12.08		"
N.	35 11	11.01					
s.	41 56	10.93	11.35	+ 1.20	12.55		3.
N.	34 25	11.46					
s.	41 12	11.25	10.77	+ 1.46	12.23	Bermuda, at anchor, Grassy bay. Mounted circle C. 9 needle C.	6.
N.	33 41	10.70					
s.	32 10	10.84	...	...	...		"
...	...	...	...	...	...		
Grs. 1.5	21 15	...	...	...	12.345	Cricket-ground.	8.
1.0	13 59	...	...	...	...	Mounted circle L. 27 needle A.	
Def. N.	31 11	...	...	...	12.362	Mount Langton.	12.
s.	30 9	...	...	...	...	Mounted circle C. 9 needle C.	
N. & s.	46 18	...	...	...	...		
Grs. 1.5	19 28	...	...	...	...		
1.0	13 26	...	...	...	...		
Def. N.	36 2	10.64	10.64	+ 1.82	12.46	Mounted circle L. 27 needle A.	22.
...	...	...	...	...	...		24.
N.	34 53	11.19	11.22	+ 1.63	12.85		25.
s.	41 12	11.25					
N.	35 38	10.84	10.83	+ 1.73	12.56		27.
s.	42 11	10.83					
N.	34 31	11.40	11.37	+ 1.43	12.80	Pitching heavily; steaming. A great deal of motion.	28.
s.	40 57	11.35					
...	...	...	...	...	...		May 2.
...	...	...	...	...	...		
N.	33 42	11.81	11.70	+ 1.58	13.28	Pitching and rolling heavily.	4.
s.	40 26	11.60					
N.	33 31	11.93	11.94	+ 1.47	13.41		5.
s.	40 14	11.70					
Grs. 1.5	22 47	11.87	11.58	+ 1.47	13.05		7.
1.0	14 41	12.28					
Def. N.	34 6	11.61	...	...	...		8.
s.	40 33	11.55	...	...	...		
N.	34 20	11.48	11.40	+ 1.45	12.85		"
s.	41 1	11.33					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1873. May. 9.	NORTH. 44° 34'	WEST. 63° 30'	NORTH. 70° 57'	- 0° 13'	N.N.W.	+ 1° 47'	+ 72° 31'	+ 1° 49'	+ 0° 27'	NORTH. 74° 45'
14.	44 40	63 35	75 1	- 0 13	...	...	...	...	...	74 48
„	44 40	63 35	75 3	- 0 15	...	...	...	..	...	74 48
20.	43 7	63 39	73 6	- 0 11	S. <sup>b</sup> W. <sup>3</sup> / <sub>4</sub> W.	- 1 38	+ 71 17	+ 1 54	+ 0 27	73 38
23.	39 48	63 26	70 55	- 0 9	S.W. <sup>b</sup> W.	- 1 5	+ 69 41	+ 2 3	+ 0 30	72 14
25.	37 0	62 52	67 2	- 0 6	W. <sup>b</sup> S.	- 0 31	+ 66 25	+ 2 29	+ 0 34	69 38
27.	34 55	63 55	66 4	- 0 4	S.S.W. <sup>1</sup> / <sub>2</sub> W.	- 1 34	+ 64 26	+ 2 41	+ 0 38	67 15
28.	33 22	64 35	64 28	- 0 3	S.S.W. <sup>1</sup> / <sub>2</sub> W.	- 1 34	+ 62 51	+ 2 47	+ 0 40	66 18
30.	32 7	64 55	62 22	- 0 2	W.S.W.	- 0 50	+ 61 30	+ 3 2	+ 0 41	65 13
31.	32 4	64 45	58 56	- 0 2	N.	+ 1 59	+ 61 35	+ 3 1	+ 0 41	65 18
			60 24	- 0 2	N.E.	+ 1 14				
			62 5	- 0 2	E.	- 0 12				
			63 57	- 0 2	S.E.	- 1 17				
			63 37	- 0 2	S.	- 1 41				
			62 6	- 0 2	S.W.	- 1 21				
			60 57	- 0 2	W.	- 0 12				
			61 4	- 0 2	N.W.	+ 1 21				
June 10.	32 19	64 52	66 22	+ 0 4	...	...	...	...	...	66 26

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
							1873.
Def. s.	33 45	11.80	11.74	+1.43	13.17	Halifax Harbour.	May 9.
s.	40 16	11.68					
N.& s.	55 31	11.46					
s.	31 32	...	...	...	12.914	Halifax.	11.
s.	37 40	...	...	...	...	...	...
N.& s.	52 28	...	...	...	...	...	...
Grns.	2.5	35 15	...	...	...	...	...
	2.0	26 56	...	...	...	...	...
Def. s.	29 16	...	...	...	12.914	" Mounted circle C. 9 needle C.	"
s.	28 48	...	...	...	...		
N.& s.	44 26	...	...	...	...		
Grns.	3.0	39 28	...	...	...		
	2.5	32 15	...	...	...		
	2.0	25 30	...	...	...		
	1.5	19 0	...	...	...		
	1.0	12 4	...	...	...		
Def. s.	33 22	10.95	11.10	+1.76	12.86		20.
s.	32 3	11.26					23.
...	...	...	...	...	...	...	25.
s.	33 21	10.95	10.97	+1.70	12.67		
s.	32 30	10.99					
s.	33 57	10.84	10.67	+1.82	12.49		27.
s.	32 58	10.68					
N.& s.	49 54	10.49	10.45	+1.82	12.28		28.
s.	34 13	10.43					
s.	33 21	10.48	...	...	...	...	30.
...	...	...	...	...	...	...	...
s.	33 28	10.84	...	+1.42	12.22	Swinging off Bermuda.	31.
s.	33 29	10.84	...	+1.52			
s.	34 16	10.43	...	+1.70			
s.	34 23	10.35	...	+1.83			
s.	34 28	10.30	...	+1.88			
s.	34 26	10.30	...	+1.84			
s.	33 55	10.60	...	+1.70			
s.	33 42	10.70	...	+1.51			
s.	30 52	...	...	...	12.309	Bermuda, Green outside Dockyd.	June 10.
s.	30 13	...	...	...	...		
Grns.	3.0	45 8	...	...	...		
	2.5	31 43	...	...	...		
	2.0	25 58	...	...	...	...	...

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R. A.H.	$\frac{1}{d}$ .	Dip.
1873. June 10.	NORTH. 32° 49'	WEST. 64° 52'	NORTH. 66° 32'	- 0° 6'	...	...	...	...	...	NORTH. 66° 26'
11.	32 51	63 41	62 43	- 0 3	E. $\frac{1}{2}$ N.	+ 0 23	+ 63 3	+ 2 46	+ 0 40	66 29
15.	33 40	61 33	63 17	- 0 3	E. $\frac{1}{2}$ N.	+ 0 23	+ 63 37	+ 2 51	+ 0 39	67 7
17.	34 53	56 50	64 52	- 0 3	E.	- 0 12	+ 64 37	+ 2 44	+ 0 38	67 59
18.	35 3	53 4	65 15	- 0 3	E. $\frac{1}{2}$ S.	- 0 21	+ 64 51	+ 2 45	+ 0 37	68 13
21.	36 6	49 12	64 46	- 0 3	E. $\frac{1}{2}$ N.	0 0	+ 64 43	+ 2 53	+ 0 37	68 13
22.	37 8	45 40	64 22	- 0 3	E.	- 0 12	+ 64 7	+ 3 4	+ 0 38	67 49
24.	38 3	39 20	62 6	- 0 3	E. S. E.	- 0 50	+ 61 13	+ 3 44	+ 0 41	65 38
26.	38 25	35 53	62 18	- 0 3	S. E. $\frac{1}{2}$ E.	- 0 58	+ 61 17	+ 3 25	+ 0 40	65 22
28.	38 28	33 34	62 54	- 0 3	E. $\frac{1}{2}$ S.	- 0 31	+ 62 20	+ 3 19	+ 0 40	66 29
29.	38 0	31 50	61 57	- 0 6	S. E.	- 1 17	+ 60 34	+ 3 43	+ 0 41	64 58
30.	38 32	31 10	61 5	- 0 6	E. S. E.	- 0 50	+ 60 9	+ 3 48	+ 0 43	64 40
July 1.	38 20	29 24	60 24	- 0 9	E. $\frac{1}{2}$ S.	- 0 31	+ 59 44	+ 3 52	+ 0 43	63 19
3.	38 20	27 0	60 11	- 0 10	S. E.	- 1 17	+ 58 44	+ 3 58	+ 0 43	63 25

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	32 19	...	...	...	12.309	Bermuda, Green outside dockyd.	1873.
s.	38 52						June 10.
Grs. 2.5	42 44					Mounted circle I, 27 needle A.	
2.0	29 53						
Def. N.	33 40	10.67					
s.	32 50	10.80	10.73	+1.60	12.33	Mounted circle C, 9 needle C.	11.
N.	33 41	10.70					
s.	33 7	10.62	10.66	+1.60	12.26		15.
N.	34 12	10.45					
s.	33 16	10.50	10.48	+1.70	12.18		17.
N.	34 39	10.24					
s.	33 50	10.22	10.23	+1.70	11.93		18.
N.	35 2	10.04					
s.	34 16	9.95					
N. & s.	51 12	10.00	9.98	+1.65	11.63		21.
Grs. 2.5	44 13	9.93					
2.0	33 43	9.97					
Def. N.	35 7	10.00					
s.	34 20	9.90	9.97	+1.60	11.57		22.
N. & s.	51 14	10.00					
N.	36 24	9.40	9.37	+1.60	10.97		24.
s.	35 31	9.34					
N.	36 54	9.17					
s.	35 42	9.24	9.20	+1.60	10.80		26.
N. & s.	53 25	9.20					
N.	37 16	9.02					
s.	36 8	9.05	9.05	+1.50	10.55		28.
N. & s.	53 41	9.06					
Grs. 3.0	66 12	9.08					
Def. N.	37 56	8.72					
s.	36 51	8.72	8.73	+1.45	10.18		29.
N. & s.	54 42	8.74					
N.	38 20	8.56					
s.	36 33	8.80	8.80	+1.40	10.20		30.
N. & s.	54 37	8.77					
Grs. 3.0	66 4	9.09					
Def. N.	38 30	8.50					
s.	36 41	8.76	8.70	+1.30	10.00		July 1.
N. & s.	54 59	8.65					
Grs. 3.0	69 16	8.88					
Def. N.	38 47	8.40					
s.	36 59	8.64	8.48	+1.40	9.88		3.
N. & s.	55 16	8.41					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1873.	NORTH.	WEST.	NORTH.							NORTH.
July 4.	37° 53'	26° 20'	58° 39'	- 0° 14'	E. b.s.	- 0° 31'	+ 57° 54'	+ 3° 52'	+ 0° 43'	61° 29'
10.	37 10	25 0	61 27	- 0 14	S.E. b.s.	- 1 28	+ 59 45	+ 3 29	+ 0 43	63 57
11.	36 27	23 47	61 43	- 0 14	S.E. $\frac{1}{2}$ s.	- 1 22	+ 60 7	+ 3 21	+ 0 43	64 11
12.	35 15	21 54	58 53	- 0 18	S.E. $\frac{1}{2}$ s.	- 1 22	+ 57 13	+ 3 54	+ 0 46	61 53
13.	34 22	20 23	56 51	- 0 22	S.E. $\frac{1}{2}$ E.	- 1 10	+ 55 19	+ 4 12	+ 0 47	60 18
14.	33 46	19 17	57 15	- 0 26	S.S.E.	- 1 38	+ 55 11	+ 4 10	+ 0 47	60 8
15.	33 21	17 50	54 10	- 0 32	S.S.E.	- 1 38	+ 52 0	+ 4 50	+ 0 47	57 37
17.	32 38	16 55	56 29	- 0 33	...	...	...	...	...	55 56
„	32 38	16 55	55 10	+ 0 2	...	...	...	...	...	55 12
18.	31 15	17 40	51 17	- 0 32	S.W. $\frac{1}{2}$ w.	- 1 13	+ 49 32	+ 5 6	+ 0 49	55 27
19.	28 35	18 15	49 33	- 0 32	W.S.W.	- 0 50	+ 48 11	+ 5 14	+ 0 49	54 14
20.	26 44	19 31	47 14	- 0 32	S.W. $\frac{1}{2}$ w.	- 0 54	+ 45 48	+ 5 24	+ 0 50	52 2

Total Force (British Units) ( $\phi$ ).						REMARKS. <i>f</i>	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	38 44	8.44	8.46	+ 1.30	9.76		1873.
S.	37 25	8.48					July 4.
N. & S.	55 35	8.47	8.23	+ 1.39	9.62		10.
N.	39 31	8.16					
S.	37 47	8.28	8.30	+ 1.39	9.69		11.
N. & S.	56 20	8.26					
N.	38 39	8.13	8.29	+ 1.39	9.68		12.
S.	37 40	8.32					
N. & S.	55 43	8.44	8.26	+ 1.35	9.61		13.
N.	39 0	8.32					
S.	37 54	8.24	8.17	...	...		14.
N. & S.	56 15	8.28					
Grs. 2.5	56 18	8.32	8.13	+ 1.39	9.52		15.
Def. N.	38 58	8.32					
S.	37 47	8.28	8.09	...	...		16.
N. & S.	56 21	8.26					
Grs. 2.0	42 40	8.17	...	...	...		17.
...	...	...					
Def. N.	39 57	8.32	...	...	9.184	Madeira.	17.
S.	38 28	8.00					
N. & S.	56 58	8.06	...	...	9.184	"	"
Grs. 2.5	59 17	8.05					
2.0	43 11	8.09	...	...	9.14	Mounted circle I. 27 needle A.	18.
Def. N.	37 0	...					
S.	35 48	...	...	...	9.14	"	19.
N. & S.	53 38	...					
Grs. 3.0	67 17	...	...	...	9.04	Mounted circle C. 9 needle C.	20.
2.5	49 43	...					
2.0	36 57	...	...	...	8.90	"	20.
Def. N.	38 51	...					
S.	45 56	...	...	...	8.90	"	20.
N. & S.	63 45	...					
Grs. 2.5	55 38	...	...	...	8.90	"	20.
2.0	41 20	...					
Def. N.	40 21	7.92	7.81	+ 1.33	9.14	Mounted circle C. 9 needle C.	18.
S.	39 32	7.62					
N. & S.	57 30	7.90	7.84	+ 1.20	9.04	"	19.
N.	40 33	7.84					
S.	40 40	7.77	7.70	+ 1.20	8.90	"	20.
N. & S.	39 17	7.69					
Grs. 2.5	58 8	7.71	...	...	8.90	"	20.
2.0	66 3	7.57					
2.0	45 22	7.78	...	...	8.90	"	20.
Def. N.	40 21	7.92					
S.	39 32	7.62					
N. & S.	57 30	7.90					
N.	40 33	7.84					
S.	40 40	7.77					
N. & S.	39 17	7.69					
Grs. 2.5	58 8	7.71					
2.0	66 3	7.57					
2.0	45 22	7.78					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{Z}$	Dip.
1873. July 21.	NORTH. 25° 46'	WEST. 20° 36'	NORTH. 45° 52'	- 0° 32'	E.	- 0° 12'	+ 45° 8'	+ 5° 38'	+ 0° 50'	NORTH. 51° 36'
22.	24 15	21 0	44 17	+ 0 7	S.W. $\frac{1}{2}$ S.	- 1 0	+ 43 10	+ 5 47	+ 0 52	49 49
23.	22 25	21 56	42 25	+ 0 9	S.W.	- 0 57	+ 41 37	+ 6 4	+ 0 52	48 33
24.	20 12	22 47	39 16	+ 0 11	S.W. $\frac{1}{2}$ W.	- 0 50	+ 38 37	+ 6 31	+ 0 52	46 0
25.	19 18	23 57	37 25	+ 0 12	S.W. $\frac{1}{2}$ W.	- 0 48	+ 36 49	+ 6 51	+ 0 52	44 32
26.	17 54	24 36	35 52	+ 0 13	S.W. $\frac{1}{2}$ S.	- 0 41	+ 35 24	+ 6 52	+ 0 52	43 8
27.	17 18	25 0	35 44	+ 0 14	S.E. $\frac{1}{2}$ S.	- 0 50	+ 35 8	+ 7 0	+ 0 52	43 0
28.	26 53	25 1	43 20	+ 0 16	...	...	...	...	...	43 36
„	16 53	25 1	43 58	- 0 22	...	...	...	...	...	43 36

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	40 37	7.80	7.75	+ 1.10	8.85	Mounted circle I. 27 needle A.	1873.
s.	39 30	7.62					July 21.
N. & s.	57 41	7.83					
N.	43 40	7.42					
s.	51 32	7.53	7.51	+ 1.20	8.71		22.
N. & s.	72 52	7.65					
Gr. 2.0	52 32	7.62					
1.5	38 44	7.31					
Def. N.	44 12	7.26	7.37	+ 1.20	8.57		23.
s.	52 2	7.41					
N. & s.	73 38	7.44					
N.	44 10	7.26					
s.	52 17	7.34	7.35	+ 1.15	8.50		24.
N. & s.	73 51	7.41					
Gr. 2.0	54 4	7.46					
1.5	38 41	7.31					
1.0	24 56	7.31	7.24	+ 1.15	8.39		25.
Def. N.	44 34	7.15					
s.	52 37	7.27					
N. & s.	74 56	7.30					
Gr. 2.0	53 45	7.49	7.08	+ 1.20	8.28		26.
1.5	39 24	7.19					
1.0	25 59	7.02					
Def. N.	45 2	7.05					
s.	53 22	7.08	7.25	+ 1.00	8.25		27.
N. & s.	76 54	7.11					
N.	45 2	7.05					
s.	53 6	7.15					
N. & s.	75 40	7.21	...	...	8.665	Mounted circle I. 27 needle B. St Vincent (Cape de Verde).	
Gr. 2.0	53 37	7.51					
1.5	38 31	7.34					
Def. N.	40 43	...					
s.	48 0	...	...	...	8.665		28.
N. & s.	66 17	...					
Gr. 2.5	62 3	...					
2.0	45 9	...					
1.5	32 27	...	...	...	8.665		
1.0	21 17	...					
Def. N.	40 15	...					
s.	48 16	...					
N. & s.	65 36	...	...	...	8.665		
Gr. 2.5	65 50	...					
2.0	45 34	...					
1.5	33 53	...					
1.0	21 57	...					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1873. July 29.	NORTH. 16° 53'	WEST. 25° 1'	NORTH. 43° 44'	- 0° 8'	...	...	...	...	...	NORTH. 43° 36'
„	16 53	25 1	43 44	- 0 8	...	...	...	...	...	43 36
Aug. 5.	16 43	25 5	34 35	+ 0 16	S.W.	- 0 39	+ 34 12	+ 7 10	+ 0 51	42 13
6.	15 58	24 41	33 35	+ 0 16	S.E. <sup>1</sup> /S.	- 0 46	+ 33 5	+ 7 8	+ 0 51	41 4
10.	14 24	23 23	29 3	+ 0 22	S. <sup>1</sup> /E.	- 0 31	+ 28 54	+ 7 50	+ 0 50	37 34
11.	12 45	22 48	26 36	+ 0 27	S. <sup>1</sup> / <sub>2</sub> E.	- 0 26	+ 26 37	+ 8 4	+ 0 50	35 31
12.	11 53	20 50	25 16	- 0 9	S.E.	- 0 26	+ 23 20	+ 8 35	+ 0 48	32 43
			23 1	+ 0 32	S. <sup>1</sup> /E.	- 0 26				
			23 23	+ 0 32	S.	- 0 26				
			21 48	+ 0 34	E.	- 0 17				

# ABSTRACT OF OBSERVATIONS WITH FOX CIRCLES.

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	36° 18'	...	...	...	8.665	St Vincent (Cape de Verde). Mounted circle C. 13 needle A.	1873. July 29.
S.	37 22						
N.&S.	55 15						
Grs. 2.5	58 37						
2.0	43 11						
1.5	31 6						
1.0	20 22						
Def. N.	35 34	...	...	...	8.665	„ C. 13 needle B.	„
S.	36 51						
N.&S.	54 44						
Grs. 2.5	57 8						
2.0	42 45						
1.5	30 20						
1.0	19 41						
Def. N.	45 0	7.03	7.13	+0.94	8.07	„ I. 27 needle A.	Aug. 5.
S.	53 3	7.16					
N.&S.	75 45	7.20					
N.	45 18	6.94					
S.	53 40	7.01	7.01	+1.00	8.01	Off St Vincent (Cape de Verde).	6.
N.&S.	77 51	7.04					
Grs. 2.0	58 30	7.09					
1.5	41 4	6.96					
1.0	26 4	7.00	6.91	+1.05	7.96		10.
Def. N.	45 55	6.80					
S.	54 26	6.85					
N.&S.	78 17	7.01					
Grs. 2.0	60 39	6.93	6.82	+1.00	7.82		11.
1.5	41 33	6.90					
1.0	26 17	6.95					
Def. N.	46 16	6.68					
S.	54 36	6.81	7.11	+0.80	7.53		12.
Grs. 2.0	60 20	6.96					
1.5	42 21	6.77					
1.0	26 40	6.86					
Def. N.	40 35	7.21	7.11	+0.80	7.53		12.
S.	41 57	7.20					
N.&S.	61 41	7.19					
Grs. 2.0	60 10	6.83					
1.5	38 12	7.23	...	+0.80	7.53		12.
1.0	25 33	7.00					
2.0	64 9	6.72					
Def. N.	46 45	6.58					
N.	45 57	6.78	...	+0.54			

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1873. Aug. 13.	NORTH. 10° 23'	WEST. 20° 22'	NORTH. 21° 22'	+0° 35'	S.E. $\frac{1}{2}$ S.	-0° 20'	+21° 37'	+ 8° 50'	+0° 45'	NORTH. 31° 12'
14.	9 29	18 55	16 34	+0 43	S.E.	-0 16	+17 1	+ 9 25	+0 42	27 8
15.	8 37	18 10	14 7	+0 45	S.E.	-0 13	+14 39	+ 9 40	+0 40	24 59
16.	7 10	16 15	8 41	+0 52	S.E. $\frac{1}{2}$ S.	-0 8	+ 9 25	+10 10	+0 33	20 8
17.	6 48	16 32	8 56	+0 52	W.	-0 5	+ 9 43	+10 9	+0 32	20 24
"	6 36	17 1	10 9	-0 11	W.	-0 5	+ 9 53	+10 8	+0 30	20 31
18.	6 23	16 17	7 31	+0 52	S.E. $\frac{1}{2}$ S.	-0 8	+ 8 15	+10 16	+0 29	19 0
"	5 57	15 33	7 55	-0 11	S.E.	-0 8	+ 7 36	+10 18	+0 30	18 24
19.	5 48	14 20	5 16 4 40 3 55 5 46	+0 52 +0 52 +0 52 +0 52	N. E. W. S. N. E. W. S.	-0 1 -0 6 -0 3 -0 6	+ 5 43	+10 28	+0 27	16 38

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	46 54	6.51	6.61	+ 0.80	7.41		1873.
s.	55 28	6.62					
Grs. 2.0	65 14	6.67					Aug. 13.
1.5	43 45	6.62					
1.0	27 42	6.62	6.62	+ 0.80	7.42		14.
Def. n.	46 48	6.54					
s.	55 50	6.55					
Grs. 2.0	64 50	6.68					
1.5	43 43	6.62	6.43	+ 0.80	7.23	Rolling heavily.	15.
1.0	27 15	6.72					
Def. n.	47 23	6.39					
s.	56 10	6.47					
n.	47 26	6.39	6.36	+ 0.80	7.16		16.
s.	56 18	6.45					
Grs. 2.0	67 41	6.53					
1.5	44 1	6.58					
1.0	26 39	6.86	6.78	+ 0.46	7.24		17.
Def. n.	46 33	6.63					
s.	54 50	6.76					
Grs. 2.0	63 32	6.75					
1.5	43 3	6.70	6.92	+ 0.46	7.42	Mounted circle C. 13 needle A.	„
1.0	25 51	7.06					
Def. n.	41 9	7.04					
s.	42 26	7.09					
n.s.s.	62 37	6.98	6.41	+ 0.73	7.14	„ I. 27 needle A.	18.
Grs. 2.0	58 14	6.97					
1.5	41 30	6.75					
1.0	26 58	6.66					
Def. n.	47 51	6.31	6.77	+ 0.73	7.51	Mounted circle C. 13 needle A.	„
s.	56 36	6.38					
Grs. 1.5	45 47	6.39					
1.0	27 58	6.55					
Def. n.	41 56	6.83	6.77	+ 0.73	7.51		
s.	43 22	6.86					
n.s.s.	63 52	6.82					
Grs. 2.0	63 30	6.93					
1.5	42 50	6.63	...	+ 0.03	7.00	Swinging.	19.
1.0	25 50	6.58					
Def. n.	45 9	7.01					
n.	47 6	6.47					
n.	47 12	6.45					
n.	47 59	6.26					
s.	53 31	7.05					
s.	56 10	6.47					
s.	55 58	6.51					
s.	56 20	6.45					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1873.	NORTH.	WEST.	NORTH.							NORTH.
Aug. 20.	4° 40'	13° 52'	1° 37'	+ 0° 52'	s.s.w.	+ 0° 7'	+ 2° 36'	+ 10° 44'	+ 0° 21'	13° 41'
"	4 19	13 56	2 55	- 0 25	s.w.	+ 0 7	+ 2 37	+ 10 47	+ 0 20	13 44
"	4 11	14 0	2 25	+ 0 12	s.w.	+ 0 7	+ 2 44	+ 10 47	+ 0 19	13 50
21.	3 6	14 55	0 44	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 1 31	+ 10 48	+ 0 19	12 38
"	3 5	14 58	0 47	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 1 34	+ 10 48	+ 0 19	12 41
"	3 3	15 16	2 22	- 0 12	w. <sup>b</sup> N.	- 0 5	+ 2 5	+ 10 47	+ 0 20	13 12
22.	2 42	17 49	4 36	- 0 12	w. <sup>b</sup> N.	- 0 5	+ 4 19	+ 10 41	+ 0 23	15 23
23.	2 25	19 59	5 23	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 6 10	+ 10 35	+ 0 28	17 13
24.	2 18	21 57	6 49	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 7 36	+ 10 28	+ 0 30	18 34
25.	1 47	24 26	7 52	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 8 39	+ 10 26	+ 0 32	19 37
26.	1 29	26 13	10 5	+ 0 52	w. <sup>b</sup> N.	- 0 5	+ 10 52	+ 10 13	+ 0 35	21 10
27.	1 14	28 26	11 43	+ 0 52	w. <sub>2</sub> N.	- 0 5	+ 12 30	+ 10 3	+ 0 36	23 9
28.	0 55	29 30	21 40	+ 0 52	...	...	...	...	...	22 32

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
...	...	...	...	...	...		1873. Aug. 20.
Def. n.	47 30	6.56	6.47	+ 0.61	7.08	Mounted circle I. 27 needle B.	..
s.	56 40	6.51					
Gr. 1.5	47 8	6.47					
Def. n.	42 18	6.76	6.74	+ 0.61	7.36	Mounted circle C. 13 needle A.	..
s.	43 36	6.80					
N. & S.	64 16	6.74					
Gr. 1.5	41 58	6.70	6.68	+ 0.51	7.19	Mounted circle I. 27 needle A.	21.
1.0	25 54	6.90					
Def. n.	46 38	6.60					
s.	55 28	6.62	6.61	+ 0.51	7.13	Mounted circle C. 13 needle A.	..
Gr. 1.5	42 53	6.71					
1.0	26 55	6.79					
...	...	...	...	...	...		"
Def. n.	42 53	6.59	6.61	+ 0.51	7.13	Mounted circle C. 13 needle A.	..
s.	43 51	6.73					
N. & S.	65 5	6.61					
Gr. 1.5	43 0	6.56	6.62	+ 0.51	7.13	Mounted circle I. 27 needle A.	22.
1.0	27 27	6.55					
...	...	...	...	...	...		22.
Def. n.	47 15	6.44	6.62	+ 0.51	7.13	Mounted circle I. 27 needle A.	23.
s.	55 52	6.53					
Gr. 1.5	43 38	6.63					
1.0	27 30	6.90	6.65	+ 0.51	7.16	Mounted circle I. 27 needle A.	24.
Def. n.	46 36	6.60					
s.	55 35	6.59					
Gr. 1.5	43 22	6.65	6.38	+ 0.51	6.89	Mounted circle I. 27 needle A.	25.
1.0	27 5	6.76					
Def. n.	47 22	6.38					
s.	56 36	6.38	6.57	+ 0.51	7.08	Mounted circle I. 27 needle A.	26.
n.	47 7	6.46					
s.	55 55	6.53					
Gr. 1.5	44 14	6.56	6.47	+ 0.47	6.94	Mounted circle I. 27 needle A.	27.
1.0	27 17	6.72					
Def. n.	47 6	6.46					
s.	50 11	6.47	...	...	6.998	St Paul rocks.	28.
n.	45 47	...	...	...	6.998	St Paul rocks.	28.
s.	54 20	...	...	...	6.998	St Paul rocks.	28.
N. & S.	78 26	...	...	...	6.998	St Paul rocks.	28.
Gr. 1.5	40 54	...	...	...	6.998	St Paul rocks.	28.
1.0	26 0	...	...	...	6.998	St Paul rocks.	28.

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1873. Aug. 29.	NORTH. 0° 55'	WEST. 29° 30'	NORTH. 10° 35' 11 5 11 5 10 59 11 2 10 43 11 16 11 23	+0° 52' +0 52 +0 52 +0 52 +0 52 +0 52 +0 52 +0 52	N. N.E. E. S.E. S. S.W. W. N.W.	-0° 6' -0 12 -0 5 -0 6 +0 8 +0 7 -0 5 -0 3	0 0 0 0 +11 50	0 0 0 0 +10 4	0 0 0 0 +0 36	NORTH. 22 30
30.	0 2	30 13	10 42	+0 53	S.W. <sup>1</sup> S. S.W. <sup>1</sup> S.	+0 8	+11 43	+10 14	+0 36	22 33
31.	SOUTH. 1 51	31 1	7 24	+0 55	S.W. <sup>1</sup> S.	+0 14	+ 8 33	+10 34	+0 32	19 39
„	2 29	31 18	7 28	-0 25	S.W. <sup>1</sup> S.	+0 15	+ 7 18	+10 39	+0 28	18 25
Sept. 1.	3 33	32 20	4 16	+0 57	S.S.W. <sup>1</sup> W.	+0 21	+ 5 34	+10 54	+0 25	16 53
4.	5 6	33 47	3 47	+0 58	S.W. <sup>1</sup> W.	+0 15	+ 5 0	+10 58	+0 24	16 22
5.	4 45	33 23	3 26	+0 58	E. <sup>1</sup> S.	0 0	+ 4 24	+10 58	+0 24	15 46
„	4 37	32 52	3 59	-0 25	E. <sup>1</sup> S.	0 0	+ 3 34	+11 0	+0 24	14 58
„	4 40	32 54	4 44	-0 25	S.W. <sup>1</sup> W.	+0 15	+ 4 34	+10 58	+0 22	15 56
6.	5 46	34 27	3 47	-0 25	S.W. <sup>1</sup> W.	+0 6	+ 3 28	+11 12	+0 27	15 7

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	45 39	6.86	...	+0.05	6.94	Swinging off St Paul rocks.	1873.
n.	45 52	7.00	...	+0.23			
n.	47 18	6.41	...	+0.48			
n.	48 3	6.25	...	+0.74			
n.	48 21	6.20	...	+0.75			
n.	48 22	6.20	...	+0.63			
n.	47 53	6.29	...	+0.48			
n.	46 36	6.64	...	+0.15			
s.	54 0	6.94	...	+0.05			Aug. 29.
s.	54 52	6.83	...	+0.23			
s.	55 49	6.55	...	+0.48			
s.	57 0	6.30	...	+0.74			
s.	57 17	6.24	...	+0.75			
s.	57 21	6.23	...	+0.63			
s.	56 25	6.47	...	+0.48			
s.	55 23	6.64	...	+0.15			
...	...	...	...	...	...		30.
n.	48 37	6.13	6.25	+0.64	6.89		31.
s.	57 23	6.22					
Grs. 1.5	46 27	6.31	6.25	+0.56	6.81	Mounted circle I. 27 needle B.	"
1.0	29 3	6.34					
Def. n.	48 29	6.42	6.25	+0.64	6.86	Mounted circle I. 27 needle A.	Sept. 1.
s.	58 4	6.21					
Grs. 1.5	50 7	6.18	6.22	+0.46	6.73		4.
1.0	30 17	6.20					
Def. n.	48 52	6.07	6.27	+0.39	6.81		5.
s.	58 8	6.08					
Grs. 1.5	47 15	6.23	6.42	+0.40	6.65		6.
1.0	28 24	6.49					
Def. n.	48 27	6.15	6.25	+0.40	6.65		
s.	57 34	6.38					
Grs. 1.5	47 46	6.17	6.25	+0.40	6.65		
1.0	28 55	6.39					
Def. n.	47 44	6.34	6.25	+0.40	6.65		
s.	56 58	6.30					
Grs. 1.5	45 51	6.38	6.25	+0.40	6.65		
1.0	27 35	6.66					
...	...	...	...	...	...	Mounted circle I. 27 needle B.	"
...	...	...	...	...	...		"
Def. n.	48 37	6.38	6.25	+0.40	6.65		
s.	57 51	6.26					
Grs. 1.5	50 25	6.15	6.25	+0.40	6.65		
1.0	30 13	6.22					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{\theta}$ .	Dip.
1873. Sept. 6.	SOUTH. 6° 4'	WEST. 34° 51'	NORTH. 2° 12'	+0° 58'	s.w. <sup>b</sup> s.	+0° 16'	+3° 26'	+11° 11'	+0° 27'	NORTH. 15° 6'
7.	6 16	34 33	2 7	+0 58	s.s.w.	+0 27	+3 32	+11 11	+0 27	15 10
„	6 57	34 41	1 29	-0 25	s.w. <sup>b</sup> w. <sub>2</sub>	+0 30	+1 34	+11 21	+0 25	13 20
8.	7 31	34 4	0 37	-0 25	s.w.	+0 25	+0 37	+11 33	+0 22	12 32
„	7 32	34 16	SOUTH. 1 31	+0 58	s.w. <sup>b</sup> w.	+0 17	-0 16	+11 34	+0 22	11 40
9.	8 30	34 36	2 52	+0 59	w. <sup>b</sup> s.	+0 4	-1 49	+11 37	+0 18	10 6
10.	9 12	34 52	3 52	+0 59	s.s.w.	+0 40	-2 13	+11 44	+0 17	9 48
11.	10 8	35 20	5 27	+0 59	w. <sup>b</sup> s.	-0 7	-4 35	+11 46	+0 11	7 22
12.	10 46	36 2	6 53	+0 59	w. <sup>b</sup> s.	-0 7	-6 1	+11 46	+0 10	5 55
13.	11 54	37 12	7 21	+0 59	s.w. <sup>b</sup> s.	+0 37	-5 45	+11 59	+0 8	6 22
14.	13 0	38 20	8 42	+0 59	w. <sup>b</sup> s.	-0 6	-7 49	+11 59	+0 8	4 18
18.	12 59	38 31	NORTH. 3 3	+0 59	...	...	...	...	...	4 2
26.	13 47	38 0	SOUTH. 9 36 11 9 12 0 10 11	+0 59 +0 59 +0 59 +0 59	N. E. S. W.	-0 55 +0 2 +0 58 +0 2	-9 43	+11 56	+0 7	2 20

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1873.
Def. N.	49° 0'	6.04	6.06	+0.47	6.53	Mounted circle I. 27 needle A.	Sept. 6.
s.	58 26	6.02					
Grs. 1.5	48 24	6.11					
	1.0	30 31	5.99	+0.50	6.49		7.
Def. N.	49 22	5.98					
s.	58 39	5.99					
	N.	49 11	6.05	+0.50	6.55	Mounted circle I. 27 needle B.	„
s.	59 14	6.02					
Grs. 1.5	52 39	5.94					
	1.0	31 17	6.02				
...	...	...	...	...	...		8.
Def. N.	49 6	6.02	6.16	+0.32	6.48	Mounted circle I. 27 needle A.	„
s.	58 22	6.02					
Grs. 1.5	46 43	6.28					
	1.0	29 14	6.10	+0.24	6.34		9.
Def. N.	48 56	6.06					
s.	58 32	6.00					
Grs. 1.0	29 39	6.24	5.96	+0.40	6.36		10.
Def. N.	49 40	5.88					
s.	59 30	5.85					
Grs. 1.5	48 57	6.06	6.06	+0.13	6.19		11.
	1.0	30 44					
Def. N.	48 45	6.11					
	s.	58 25	6.08	+0.13	6.21		12.
N.	48 40	6.12					
s.	58 18	6.04					
	N.	49 42	5.94	+0.30	6.24		13.
s.	59 45	5.81					
Grs. 1.5	50 20	5.94					
	1.0	30 5	6.01	0.00	6.01		14.
Def. N.	49 0	6.04					
s.	58 40	5.98					
	N.	49 41	...	...	5.988	Bahia.	18.
	s.	59 25					
Grs. 1.5	49 56						
	1.0	30 20					
...	...	...	...	...	...	Swinging off Bahia.	26.

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A <sub>H</sub>	$\frac{1}{\theta}$ .	Dip.
1873. Sept. 26.	SOUTH. 13° 44'	WEST. 37° 57'	SOUTH. 10° 16'	+0° 59'	E. <sup>1</sup> / <sub>N</sub> .	-0° 8'	-9° 24'	+11° 56'	+0° 5'	NORTH. 2° 37'
27.	14 47	37 1	14 57	+0 58	S.	+1 00	-12 59	+12 13	0 0	SOUTH. 0 46
28.	16 39	37 0	18 26	+0 54	S. <sup>1</sup> / <sub>E</sub> . <sup>3</sup> / <sub>4</sub> E.	+0 58	-16 34	+12 0	-0 8	4 42
„	17 19	36 42	17 35	-0 24	S. <sup>1</sup> / <sub>E</sub> . <sup>1</sup> / <sub>2</sub> E.	+0 55	-17 4	+11 52	-0 10	5 22
29.	18 50	35 51	22 7	+0 49	S. <sup>1</sup> / <sub>E</sub> . <sup>1</sup> / <sub>2</sub> E.	+0 59	-20 19	+11 35	-0 18	9 2
„	19 22	35 24	21 21	-0 22	S. <sup>1</sup> / <sub>E</sub> . <sup>1</sup> / <sub>2</sub> E.	+0 58	-20 45	+11 28	-0 18	9 35
30.	20 15	35 18	24 5	+0 47	S. <sup>1</sup> / <sub>S</sub> . <sup>1</sup> / <sub>2</sub> W.	+1 2	-22 16	+11 19	-0 20	11 17
Oct. 1.	21 56	35 42	26 26	+0 46	S. <sup>1</sup> / <sub>2</sub> W.	+1 16	-24 24	+11 14	-0 24	13 34
2.	24 28	34 31	30 14	+0 42	S. <sup>1</sup> / <sub>E</sub> . <sup>1</sup> / <sub>2</sub> E.	+1 10	-28 22	+10 34	-0 34	18 22
„	25 6	33 51	31 41	+0 40	S. <sup>1</sup> / <sub>E</sub> . <sup>1</sup> / <sub>2</sub> E.	+1 12	-29 49	+10 20	-0 34	20 3
4.	27 29	31 29	35 0	+0 37	S. <sup>1</sup> / <sub>E</sub> .	+1 10	-33 13	+9 47	-0 40	24 6
5.	28 48	29 16	36 59	+0 36	S. <sup>1</sup> / <sub>E</sub> .	+1 11	-35 12	+9 22	-0 41	26 31

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. x.	48 15	6.21	6.29	0.00	6.29		1873.
s.	57 48	6.14					
Grs. 1.5	46 35	6.29					
1.0	28 19	6.51					
Def. x.	50 3	5.80	5.87	+ 0.30	6.17		27.
s.	60 4	5.75					
Grs. 1.5	51 5	5.87					
1.0	30 35	6.07					
Def. x.	50 39	5.66	5.70	+ 0.20	5.90		28.
s.	60 19	5.73					
s.	50 13	6.06					
s.	60 14	5.88					
Grs. 1.5	54 26	5.83	5.89	+ 0.15	6.04	Mounted circle I. 27 needle B.	„
1.0	32 37	5.80					
Def. x.	50 29	5.68					
s.	59 42	5.81					
Grs. 1.5	50 6	5.96	5.88	+ 0.11	5.99	Mounted circle I. 27 needle A.	29.
1.0	30 44	6.05					
Def. x.	49 55	6.09					
s.	60 3	5.89					
Grs. 1.5	53 56	5.86	5.92	+ 0.07	5.99	Mounted circle I. 27 needle B.	„
1.0	32 16	5.86					
Def. x.	49 57	5.80					
s.	59 22	5.87					
Grs. 1.5	50 23	5.93	5.93	+ 0.03	5.96	Mounted circle I. 27 needle A.	30.
1.0	30 13	6.13					
Def. x.	49 43	5.87					
s.	59 16	5.88					
Grs. 1.5	49 46	5.99	5.98	0.00	5.98		Oct. 1.
1.0	30 5	6.15					
Def. x.	49 23	5.94					
s.	58 49	5.98					
Grs. 1.5	48 41	6.09	6.02	- 0.10	5.92		2.
1.0	30 35	6.07					
...	...	...					
Def. x.	48 59	5.92					
s.	58 18	6.04	6.09	- 0.30	5.79		„
Grs. 1.5	48 46	6.08					
1.0	29 12	6.33					
Def. x.	47 40	6.34					
s.	56 41	6.36	6.44	- 0.40	6.04		5.
Grs. 1.5	44 38	6.51					
1.0	28 3	6.56					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1873. Oct. 8.	SOUTH. 31° 15'	WEST. 26° 59'	SOUTH. 39° 38'	+ 0° 35'	S.	+ 1° 33'	- 37° 30'	+ 9° 12'	- 0° 45'	29° 3'
10.	35 25	23 40	42 17	- 0 7	E.S.E.	+ 0 37	- 41 37	+ 8 12	- 0 48	34 13
11.	35 40	20 51	46 4	+ 0 28	S.E. <sup>1</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 47	- 44 49	+ 7 32	- 0 51	38 8
12.	36 0	18 27	46 21	+ 0 28	S.E. <sup>1</sup> E.	+ 0 56	- 44 57	+ 7 32	- 0 51	38 16
13.	36 10	14 45	47 24	+ 0 28	E. <sup>1</sup> S. <sup>1</sup> / <sub>2</sub> S.	+ 0 24	- 46 32	+ 7 45	- 0 51	39 38
17.	37 20	12 18	46 36	- 0 7	N.	- 1 35	- 47 53	+ 7 20	- 0 51	41 24
			46 57	- 0 7	N.E.	- 1 9				
			47 45	- 0 7	E.	+ 0 7				
			49 25	- 0 7	S.E.	+ 1 13				
			50 24	- 0 7	S.	+ 1 43				
			47 55	- 0 7	S.W.	+ 1 3				
			47 45	- 0 7	W.	+ 0 7				
			46 11	- 0 7	N.W.	- 1 9				
			45 48	- 0 7	N.N.W.	- 1 25				
19.	37 0	10 13	51 5	+ 0 24	E. <sup>1</sup> S.	+ 0 25	- 50 16	+ 6 44	- 0 52	44 24
22.	35 58	0 7	55 6	+ 0 21	S.E. <sup>1</sup> E.	+ 1 0	- 53 45	+ 6 17	- 0 51	48 19
24.	36 2	EAST. 5 2	57 27	+ 0 19	S.E. <sup>1</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 53	- 56 15	+ 5 32	- 0 49	51 32
25.	36 22	8 42	58 57	+ 0 19	S.E. <sup>1</sup> E. <sup>1</sup> / <sub>2</sub> E.	+ 0 53	- 57 45	+ 5 18	- 0 49	53 16

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.			
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.					
1873.										
Def. s.	47 12	6.33	6.42	- 0.30	6.12		Oct. 8.			
s.	56 33	6.40								
Grs. 1.5	45 16	6.44								
1.0	28 12	6.53								
Def. s.	46 5	6.74	6.74	- 0.50	6.24	Mounted circle C. 13 needle A. Mounted circle I. 27 needle A. Rolling.	10.			
s.	54 55	6.74					11.			
s.	45 42	6.83					6.92	- 0.60	6.32	12.
s.	53 43	7.01								7.06
s.	45 6	7.00								
s.	53 11	7.13								
Grs. 1.5	40 12	7.09								
1.0	25 53	7.01								
Def. s.	38 29	7.20	...	- 0.98	6.36	Mounted circle C. 13 needle A. Swinging off Tristan d'Acunha.	17.			
s.	38 51	7.10	...	- 0.90						
s.	39 20	6.96	...	- 0.71						
s.	39 22	6.95	...	- 0.54						
s.	39 11	7.00	...	- 0.48						
s.	38 59	7.06	...	- 0.56						
s.	38 43	7.15	...	- 0.71						
s.	38 11	7.27	...	- 0.89						
s.	38 5	7.30	...	- 0.92						
s.	44 43	7.11	7.34	- 0.65	6.69	Mounted circle I. 27 needle A.	19.			
s.	52 30	7.29								
Grs. 2.0	57 33	7.16								
1.5	39 06	7.24								
Def. s.	43 37	7.44	7.54	- 0.64	6.90	Rolling heavily.	22.			
s.	51 23	7.56								
Grs. 2.0	54 2	7.46								
1.5	36 56	7.69								
1.0	24 12	7.53								
Def. s.	42 40	7.72	7.78	- 0.60	7.18		24.			
s.	50 38	7.76								
N. & s.	71 28	7.71								
Grs. 2.0	51 15	7.75								
1.5	35 6	7.95	8.07	- 0.60	7.47		25.			
1.0	23 24	7.78								
Def. s.	41 52	7.97								
s.	49 29	8.05								
N. & s.	69 20	8.00	8.27							
Grs. 2.0	46 55	8.27								
1.5	32 50	8.06								

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{d}$ .	Dip.
1873. Oct. 26.	SOUTH. 35° 57'	EAST. 11° 9'	SOUTH. 59° 17'	+ 0° 18'	S.E. $\frac{1}{2}$ E.	+ 0° 53'	- 58° 6'	+ 5° 12'	- 0° 48'	SOUTH. 55° 42'
28.	34 40	17 40	59 50	+ 0 17	E.N.E.	+ 0 27	- 60 0	+ 4 50	- 0 48	55 58
Nov. 12.	33 56	18 28	56 13	+ 0 17	...	...	...	...	...	55 56
"	"	"	55 43	- 0 13	...	...	...	...	...	55 56
22.	"	"	55 50	- 0 6	...	...	...	...	...	55 56
23.	"	"	55 36	- 0 20	...	...	...	...	...	55 56

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	11 33	8.10	8.18	- 0.60	7.58		1873.
S.	19 25	8.05					
N. & S.	69 10	8.05					
GrS. 2.5	70 40	8.23					Oct. 26.
2.0	48 2	8.13					
1.5	34 32	8.43					
1.0	21 56	8.26					
Def. N.	40 23	8.54	8.52	- 0.71	7.81	Very uneasy motion.	28.
S.	47 45	8.57					
N. & S.	66 50	8.44					
N.	42 43	...	...	...	7.701	Cape of Good Hope, Magnetic Observatory.	Nov. 12.
S.	50 45	...	...	...	7.701		
N. & S.	71 30	...	...	...	7.701		
GrS. 2.0	51 40	...	...	...	7.701		
1.5	36 24	...	...	...	7.701		
1.0	23 37	...	...	...	7.701		
Def. N.	43 0	...	...	...	7.701	Mounted circle I. 27 needle B.	,
S.	51 52	...	...	...	7.701		
N. & S.	71 39	...	...	...	7.701		
GrS. 2.0	57 2	...	...	...	7.701		
1.5	39 25	...	...	...	7.701		
1.0	26 13	...	...	...	7.701		
Def. N.	36 48	...	...	...	7.704	Mounted circle C. 13 needle A.	22.
S.	38 30	...	...	...	7.704		
N. & S.	56 36	...	...	...	7.704		
GrS. 2.0	49 54	...	...	...	7.704		
1.5	35 23	...	...	...	7.704		
1.0	23 6	...	...	...	7.704		
Def. N.	36 35	...	...	...	7.704	Mounted circle C. 13 needle B.	23.
S.	38 42	...	...	...	7.704		
N. & S.	56 45	...	...	...	7.704		
GrS. 2.5	75 21	...	...	...	7.704		
2.0	51 27	...	...	...	7.704		
1.5	36 10	...	...	...	7.704		
1.0	23 26	...	...	...	7.704		

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1873. Dec. 11.	SOUTH. 33° 53'	EAST. 18° 27'	SOUTH. 56° 51' 57 18 58 13 58 49 59 15 59 48 60 2 60 18 60 25 60 20 59 43 59 0 58 56 58 9 57 58 57 7	-0° 20' -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20 -0 20	N. N.N.E. N.E. E.N.E. E. E.S.E. S.E. S.S.E. S. S.S.W. S.W. W.S.W. W. W.N.W. N.W. N.N.W.	-1° 30' -1 20 -1 3 -0 27 +0 12 +0 46 +1 15 +1 27 +1 36 +1 34 +1 4 +0 44 +0 13 -0 25 -0 58 -1 22	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
17.	34 23	18 37	60 9	-0 20	s.s.w.	+1 34	-58 55	+5 22	-1 57	55 30
18.	35 48	18 44	61 31	-0 20	s. <sup>b</sup> w.	+1 35	-60 16	+5 0	-1 56	57 12
19.	36 50	19 24	62 9	-0 20	s. <sup>b</sup> e. <sub>2</sub> e.	+1 33	-60 56	+4 44	-1 54	58 6
20.	38 43	20 47	63 12	-0 9	s. <sup>b</sup> e.	+1 34	-61 47	+4 36	-1 52	59 3
21.	40 58	24 9	64 59	-0 7	s.e. <sup>b</sup> s.	+1 21	-63 45	+4 4	-1 47	61 28
22.	42 29	27 48	66 1	-0 6	s. <sup>b</sup> e.	+1 31	-64 36	+3 52	-1 45	62 29

Total Force (British Units ( $\phi$ )).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	34 3	8.52	...	-0.98	7.68	Swinging—Cape of Good Hope.	1873.
N.	34 8	8.49	...	-0.95			Dec. 11.
N.	34 26	8.39	...	-0.90			
N.	34 24	8.40	...	-0.81			
N.	34 34	8.34	...	-0.71			
N.	34 34	8.35	...	-0.62			
N.	34 34	8.34	...	-0.54			
N.	34 30	8.37	...	-0.50			
N.	34 32	8.35	...	-0.48			
N.	34 27	8.38	...	-0.49			
N.	34 34	8.34	...	-0.56			
N.	34 34	8.34	...	-0.62			
N.	34 19	8.43	...	-0.71			
N.	34 44	8.28	...	-0.81			
N.	34 4	8.52	...	-0.89			
N.	34 9	8.49	...	-0.95			
N.	34 20	8.42	8.39	-0.49	7.90		17.
S.	36 32	8.43					
N. & S.	54 5	8.42					
Gr. 2.0	46 47	8.27					
1.5	33 2	8.34	8.48	-0.48	8.00		18.
1.0	21 15	8.45					
Def. N.	34 0	8.53					
S.	36 15	8.51	8.55	-0.44	8.11		19.
N. & S.	53 29	8.58					
Gr. 2.5	62 46	8.38					
2.0	45 8	8.50					
1.5	32 28	8.47	8.76	-0.44	8.32	Mounted circle I. 27 needle B.	20.
1.0	21 22	8.41					
Def. N.	33 54	8.58					
S.	36 0	8.60	9.15	-0.42	8.73	Rolling heavily.	21.
N. & S.	53 15	8.65					
Gr. 2.5	62 12	8.43					
2.0	45 13	8.49					
1.5	32 4	8.56	9.23	-0.38	8.85	Rolling heavily.	22.
1.0	21 5	8.52					
Def. N.	40 6	8.70					
S.	48 18	8.82					
N.	39 33	8.92	9.23	-0.38	8.85	Rolling heavily.	22.
S.	46 45	9.39					
N. & S.	64 27	9.13					
N.	38 52	9.20					
S.	47 5	9.26	9.23	-0.38	8.85	Rolling heavily.	22.
N. & S.	64 5	9.23					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\sin \theta}$ .	$\frac{1}{\sin \theta}$ .	Dip.
1873.	SOUTH.	EAST.	SOUTH.							SOUTH.
Dec. 23.	44° 48'	31° 19'	67° 31'	- 0° 4'	S. <sup>b</sup> E.	+ 1° 30'	- 66° 5'	+ 3° 33'	- 1° 40'	64° 12'
25.	46 30	36 29	68 48	- 0 2	S.E.	+ 1 10	- 67 40	+ 3 8	- 1 34	66 6
26.	46 50	37 52	67 53	- 0 4	S.W.	+ 0 57	- 67 0	+ 3 23	- 1 37	65 14
27.	46 46	38 0	66 50	- 0 5	W.N.W.	- 1 0	- 67 55	+ 3 3	- 1 33	66 25
28.	46 49	40 14	70 43	0 0	S.E. <sup>b</sup> E.	+ 0 50	- 69 53	+ 2 36	- 1 26	68 43
29.	46 46	42 14	70 37	0 0	S.E. <sup>b</sup> E. $\frac{1}{2}$ E.	+ 0 50	- 69 47	+ 2 36	- 1 27	68 38
	46 48	45 56	70 15	0 0	E. <sup>b</sup> S. $\frac{3}{4}$ S.	+ 0 35	- 69 40	+ 2 37	- 1 27	68 30
30.	46 18	47 51	70 48	0 0	E. <sup>b</sup> S. $\frac{3}{4}$ S.	+ 0 33	- 70 15	+ 2 28	- 1 25	69 12
31.	46 20	49 55	71 38	+ 0 1	E.S.E.	+ 0 32	- 71 5	+ 2 16	- 1 22	70 11
1874.										
Jan. 2.	46 43	51 10	71 26	+ 0 1	E.	+ 0 6	- 71 19	+ 2 14	- 1 21	70 26
4.	46 33	57 31	72 12	+ 0 2	S.S.E. $\frac{1}{2}$ E.	+ 1 13	- 70 56	+ 2 17	- 1 22	70 1
5.	47 38	61 15	72 16	+ 0 2	S.E. $\frac{1}{2}$ S.	+ 0 54	- 71 20	+ 2 12	- 1 20	70 29
6.	48 32	67 43	73 21	+ 0 3	S.E. <sup>b</sup> E.	+ 0 48	- 72 30	+ 1 56	- 1 16	71 50

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi^\circ$ .	Mean $\phi^\circ$ .	Correction for Ship's Head.	Total Force.		
							1873.
Def. N.	38 23	9.40	9.53	- 0.34	9.19	Rolling.	Dec. 23.
S.	46 10	9.61					
N. & S.	62 43	9.58					
S.	45 18	9.96	9.95	- 0.38	9.57		25.
N. & S.	61 25	9.94					
N.	37 15	9.89					
S.	44 34	10.26	10.05	- 0.38	9.67	Off Marion island. Rolling heavily.	26.
N. & S.	61 12	10.00					
N.	37 14	9.90					
S.	44 50	10.15	10.04	- 0.40	9.64	Between Marion and Prince Edward islands.	27.
N. & S.	60 57	10.08					
N.	37 5	9.96					
S.	44 48	10.16	10.07	- 0.33	9.74		28.
N. & S.	60 49	10.12					
Gr. 2.5	53 45	9.98					
2.0	44 4	10.04	10.00	- 0.33	9.67		"
1.5	29 10	10.04					
1.0	19 27	10.22					
Def. N.	37 0	10.00	10.30	- 0.36	9.94		29.
N.	36 30	10.24					
S.	44 14	10.40					
N. & S.	60 22	10.26	10.46	- 0.34	10.12		30.
N.	36 23	10.29					
S.	43 45	10.61					
N. & S.	59 38	10.48	10.52	- 0.32	10.20		31.
N.	36 12	10.38					
S.	43 46	10.60					
N. & S.	59 24	10.55					
							1874.
N.	35 32	10.73	10.69	- 0.35	10.34	Rolling heavily.	Jan. 2.
S.	43 8	10.88					
N. & S.	58 49	10.73					
Gr. 2.5	50 13	10.47	10.91	- 0.28	10.63	Rolling heavily.	4.
2.0	37 40	10.58					
1.5	27 1	10.77					
Def. N.	35 37	10.68	11.10	- 0.30	10.80	Rolling heavily.	5.
S.	42 42	11.09					
N. & S.	58 8	10.97					
N.	35 8	10.95	11.53	- 0.30	11.23		6.
S.	42 10	11.35					
N. & S.	58 0	11.01					
N.	34 32	11.29					
S.	41 18	11.81					
N. & S.	56 38	11.48					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A. H.	$\frac{1}{d}$ .	Dip.
1871. Jan. 7.	SOUTH. 48° 41'	EAST. 69° 3'	SOUTH. 70° 55'	+0° 5'	...	...	...	...	...	SOUTH. 70° 50'
12.	49° 8'	70° 11'	71° 53'	+0° 6'	...	...	...	...	...	71° 47'
Feb. 2.	52° 15'	71° 30'	73° 31'	+0° 3'	s.s.w.	+1 16	-72 12	+1 54	-1 17	71 35
4.	52° 26'	71° 40'	73° 47'	+0° 4'	w. $\frac{1}{2}$ N.	0 0	-73 43	+1 36	-1 11	73 18
6.	52° 56'	72° 20'	72° 11'	+0° 2'	E.s.e.	+0 38	-71 31	+2 3	-1 20	70 48
7.	53° 37'	73° 16'	72° 50'	+0° 2'	s.s.w.	+1 17	-71 31	+2 4	-1 20	70 47
8.	55° 10'	74° 27'	73° 31'	+0° 4'	s.w. $\frac{1}{2}$ s.	+1 4	-72 23	+1 58	-1 16	70 41
„	56° 16'	74° 55'	73° 9'	-0° 13'	s.s.w. $\frac{1}{2}$ w.	+1 3	-72 19	+2 0	-1 17	71 36
9.	57° 56'	75° 54'	74° 31'	+0° 5'	s.w. $\frac{1}{2}$ w.	+1 0	-73 26	+1 47	-1 12	72 51
10.	59° 36'	77° 0'	75° 22'	+0° 6'	s.w. $\frac{1}{2}$ s.	+0 59	-74 17	+1 38	-1 9	73 48
„	60° 42'	78° 5'	75° 22'	-0° 13'	s. $\frac{1}{2}$ w. $\frac{1}{2}$ w.	+1 7	-74 28	+1 38	-1 8	73 58
11.	60° 50'	80° 13'	76° 10'	+0° 8'	s. $\frac{1}{2}$ e.	+1 7	-74 55	+1 33	-1 6	74 28

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	34 53	...	...	...	11.032	Kerguelen island, Christmas harbour.	1874. Jan. 7.
s.	42 20						
N. & s.	57 29						
Gr. 2.0	35 45						
1.5	25 40						
1.0	18 31						
Def. N.	34 18	...	...	...	11.422	,, Betsy cove.	12.
s.	41 53						
N. & s.	56 45						
Gr. 3.0	59 5						
2.5	45 38						
2.0	34 24						
1.5	25 5						
1.0	17 0						
Def. N.	33 18	12.02	12.02	- 0.26	11.76	Rolling and pitching heavily.	Feb. 2.
s.	40 51	12.05					
N. & s.	55 15	11.98					
N.	33 25	11.94	12.08	- 0.32	11.76		4.
s.	40 21	12.29					
N. & s.	55 10	12.00					
N.	33 6	12.12	12.17	- 0.32	11.85		6.
s.	40 20	12.29					
N. & s.	55 1	12.05					
N.	32 47	12.31	12.52	- 0.28	12.24		7.
s.	39 42	12.61					
N. & s.	53 34	12.63					
N.	32 47	12.30	12.30	- 0.26	12.04		8.
s.	40 12	12.33					
N. & s.	54 29	12.26					
N.	32 34	12.45	12.58	- 0.23	12.35	East face only observed.	..
s.	39 33	12.68					
N. & s.	53 37	12.60					
N.	31 56	12.85	12.77	- 0.27	12.50		9.
s.	39 23	12.76					
N. & s.	53 23	12.69					
N.	31 38	13.04	12.95	- 0.24	12.71		10.
s.	38 57	13.01					
N. & s.	53 7	12.79					
N.	31 49	12.91	12.99	- 0.20	12.79	East face only observed.	..
s.	38 42	13.15					
N. & s.	52 52	12.90					
N.	31 15	13.26	13.20	- 0.18	13.02		11.
s.	38 35	13.21					
N. & s.	52 21	13.12					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R $\Delta H$ .	$\frac{1}{d}$ .	Dip.
1874. Feb. 11.	SOUTH. 60° 58'	EAST. 80° 23'	SOUTH. 76° 4'	+0° 8'	S.W.	+0° 51'	-75° 5'	+1° 31'	-1° 5'	74° 39'
12.	63 0	80 15	76 57	+0 9	S.W. <sup>b</sup> W.	+0 38	-76 10	+1 18	-1 0	75 52
13.	64 26	80 20	77 38	+0 10	S.W. <sup>b</sup> W.	+0 36	-76 52	+1 8	-0 57	76 41
„	65 10	80 20	77 36	+0 10	S.W. <sup>b</sup> W.	+0 36	-76 50	+1 8	-0 57	76 39
14.	65 45	79 41	76 37	+0 10	W.	+0 4	-76 24	+1 13	-0 59	76 10
15.	65 59	78 24	77 32	+0 10	W.	+0 4	-77 18	+1 2	-0 55	77 11
16.	66 28	77 53	76 35	+0 10	E. <sup>b</sup> N.	0 0	-76 25	+1 10	-0 59	76 14
17.	65 10	79 51	77 6	+0 10	S.E. <sup>b</sup> S.	+0 56	-76 0	+1 15	-1 1	75 46
18.	64 50	84 49	77 37	-0 10	S.E. <sup>b</sup> S.	+0 56	-76 51	+1 8	-0 57	76 10
20.	64 0	87 40	78 15	+0 10	S.E. <sup>b</sup> E. <sup>1</sup> / <sub>2</sub> E.	+0 33	-77 32	+1 4	-0 54	77 22
„	63 56	88 41	79 5	+0 11	S.E. <sup>1</sup> / <sub>2</sub> N.	+0 49	-78 15	+0 57	-0 51	78 9
21.	63 30	89 8	78 49	-0 8	S.E. <sup>b</sup> S.	+0 55	-78 2	+1 0	-0 52	77 54
22.	63 41	91 24	79 39	+0 11	S.	+1 3	-78 25	+0 57	-0 50	78 18

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.			
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.					
						Very uneasy motion.	1874.			
Def. N.	31 10	13 32	13 19	- 0 20	12 99		Feb. 11.			
s.	38 44	13 11								
N. & s.	52 18	13 14								
N.	31 11	13 30	13 26	- 0 20	13 06		12.			
s.	38 21	13 33								
N. & s.	52 17	13 14								
N.	31 9	13 31	13 20	- 0 21	12 99		13.			
s.	38 34	13 19								
N. & s.	52 21	13 11								
N.	30 55	13 46	13 35	- 0 21	13 14		"			
s.	38 19	13 33								
N. & s.	51 58	13 26								
N.	30 51	13 49	13 43	- 0 23	13 20				14.	
s.	38 5	13 46								
N. & s.	51 48	13 34								
N.	31 0	13 39	13 19	- 0 23	12 96				15.	
s.	38 16	13 31								
N. & s.	52 10	13 17								
Grs. 3 0	47 45	13 04	13 19	- 0 23	12 96				15.	
2 0	29 5	13 30								
1 5	15 18	12 90								
Def. N.	31 12	13 25	13 17	- 0 23	12 94					
s.	38 23	13 26								
N. & s.	52 6	13 00								
N.	31 4	13 34	13 28	- 0 18	13 10		17.			
s.	38 15	13 33								
N. & s.	52 10	13 16								
N.	30 56	13 47	13 43	- 0 18	13 25		18.			
s.	37 45	13 51								
N. & s.	51 23	13 40								
Grs. 3 0	46 32	13 30	13 58	- 0 20	13 38		20.			
2 0	28 42	13 46								
Def. N.	30 32	13 64								
s.	37 42	13 64	13 66	- 0 16	13 50		"			
N. & s.	51 27	13 46								
N.	30 26	13 69	13 66	- 0 16	13 50	"				
s.	37 39	13 67								
N. & s.	51 2	13 63								
N.	29 40	14 19	13 89	- 0 14	13 75	21.				
s.	37 23	13 84								
N. & s.	51 9	13 58								
N.	29 58	13 97	13 85	- 0 11	13 74	22.				
s.	37 22	13 84								
N. & s.	50 47	13 73								

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
Feb. 22.	63° 30'	90° 47'	77° 43'	- 0 30'	N.	- 1° 30'	0	0	0	0
			78 41	- 0 30	N.E.	- 0 37				
			80 24	- 0 30	E.	+ 0 3				
			79 58	- 0 30	S.E.	+ 0 46				
			79 10	- 0 30	S.	+ 1 3	- 79 27	+ 0 47	- 0 47	79 27
			78 19	- 0 30	S.W.	+ 0 46				
			78 39	- 0 30	W.	+ 0 3				
			77 47	- 0 30	N.W.	- 1 1				
23.	64 11	93 11	80 14	+ 0 12	S.	+ 1 3	- 78 59	+ 0 52	- 0 49	78 56
25.	63 39	95 23	79 58	+ 0 12	E.b.S.	+ 0 16	- 79 30	+ 0 50	- 0 46	79 26
26.	62 26	95 44	79 5	+ 0 11	N.W.b.W.	- 0 45	- 79 39	+ 0 49	- 0 46	79 36
27.	61 33	97 49	79 34	+ 0 11	E. $\frac{3}{4}$ S.	+ 0 12	- 79 11	+ 0 54	- 0 48	79 5
28.	59 17	100 14	79 7	+ 0 11	E.b.N.	- 0 9	- 79 5	+ 0 53	- 0 48	79 0
Mar. 1.	57 28	102 33	78 51	+ 0 11	E.b.N. $\frac{1}{2}$ N.	- 0 15	- 78 58	+ 0 52	- 0 49	78 55
2.	55 8	107 4	78 16	+ 0 10	E. $\frac{1}{2}$ N.	- 0 3	- 78 9	+ 0 55	- 0 52	78 6
3.	53 55	108 35	78 45	+ 0 11	E. $\frac{1}{2}$ N.	- 0 3	- 78 37	+ 0 48	- 0 50	78 39
4.	53 4	109 21	78 36	+ 0 11	S.E.	+ 0 46	- 77 39	+ 0 55	- 0 53	77 37
5.	51 35	113 56	78 32	+ 0 11	E. $\frac{1}{2}$ N.	- 0 3	- 78 21	+ 0 43	- 0 50	78 31

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	22° 41'	13.88	...	- 0.18	13.73	Mounted circle C. 13 needle B. Swinging.	1874. Feb. 22.
N.	22 37	13.92	...	- 0.15			
N.	22 49	13.79	...	- 0.14			
N.	23 0	13.70	...	- 0.12			
N.	22 50	13.78	...	- 0.11			
N.	22 34	13.95	...	- 0.12			
N.	22 37	13.92	...	- 0.14			
N.	22 23	14.08	...	- 0.15			
N.	29 58	13.96	13.91	- 0.11	13.80	Mounted circle I. 27 needle B.	23.
S.	37 15	13.91					
N. & S.	50 33	13.83					
Grs. 3.5	53 41	13.87					
3.0	43 57	13.90					
2.5	35 19	13.92					
2.0	27 35	13.96					
Def. N.	29 46	14.09	14.01	- 0.14	13.87		25.
S.	37 2	14.04					
N. & S.	50 34	13.81					
Grs. 3.0	44 21	13.81					
2.0	26 43	14.29					
Def. S.	37 12	13.92	13.92	- 0.14	13.78	East face only observed.	26.
N.	29 53	14.00	13.98	- 0.14	13.84		27.
S.	37 4	14.00					
N. & S.	50 15	13.95					
N.	30 0	13.92	13.95	- 0.14	13.81	East face only observed— Great motion.	28.
S.	37 5	13.98					
N.	29 41	14.12	14.03	- 0.15	13.88		Mar. 1.
S.	36 56	14.06					
N. & S.	50 18	13.92					
N.	29 26	14.29	14.22	- 0.16	14.06	Very uneasy motion.	2.
S.	36 30	14.33					
N. & S.	50 2	14.04					
N.	29 25	14.29	14.27	- 0.17	14.10		3.
S.	36 38	14.23					
N. & S.	49 31	14.29					
N.	29 14	14.11	14.28	- 0.14	14.14		4.
S.	36 29	14.32					
N. & S.	49 50	14.11					
N.	29 6	14.19	14.24	- 0.15	14.09		5.
S.	36 52	14.07					
N. & S.	49 42	14.18					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
March 6.	50° 51'	118° 19'	78° 2'	+ 0° 10'	E. $\frac{1}{2}$ N.	0° 0'	- 77° 52'	+ 0° 45'	- 0° 52'	77° 59'
7.	49 48	123 17	77 36	+ 0 9	E. $\frac{1}{2}$ N.	- 0 8	- 77 35	+ 0 47	- 0 53	77 41
8.	49 20	127 3	76 57	+ 0 9	E. $\frac{1}{2}$ N. $\frac{1}{2}$ N.	- 0 14	- 77 2	+ 0 48	- 0 55	77 9
9.	48 20	130 1	76 59	+ 0 9	N.E. $\frac{1}{2}$ E.	- 0 28	- 77 18	+ 0 45	- 0 54	77 27
10.	47 25	130 32	76 21	+ 0 7	N.N.W.	- 1 2	- 77 16	+ 0 43	- 0 54	77 27
11.	46 26	130 6	75 46	+ 0 6	N.E. $\frac{1}{2}$ N.	- 0 49	- 76 29	+ 0 44	- 0 57	76 42
12.	44 44	132 0	74 28	+ 0 5	N.E. $\frac{1}{2}$ N.	- 0 48	- 75 11	+ 0 55	- 1 3	75 19
14.	41 28	136 18	71 19	+ 0 4	N.E. $\frac{1}{2}$ E.	- 0 26	- 74 41	+ 1 13	- 1 16	71 44
15.	39 34	141 14	69 22	+ 0 3	E.N.E.	- 0 15	- 69 34	+ 1 23	- 1 23	69 34

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1874.
Def. N.	29 16	14 38	14 40	- 0 16	14 26	Heavy breeches.	March 6.
S.	36 19	14 41					
N. & S.	49 22	14 36					
Grs. 3 5	51 34	14 27					
3 0	42 5	14 40					
2 5	33 57	14 41	14 48	- 0 17	14 31		7.
2 0	26 16	14 54					
Def. N.	29 14	14 39					
S.	35 55	14 65					
N. & S.	49 18	14 40					
N.	28 49	14 68	14 55	- 0 17	14 38		8.
S.	36 11	14 49					
N. & S.	49 21	14 36					
Grs. 3 5	50 28	14 49					
3 0	40 59	14 71					
Def. N.	29 2	14 52	14 44	- 0 17	14 27		9.
S.	36 9	14 50					
N. & S.	49 29	14 29					
Grs. 3 5	51 13	14 34					
3 0	41 52	14 46					
2 5	33 42	14 50	14 41	- 0 17	14 24		10.
Def. N.	29 12	14 40					
S.	36 3	14 56					
N. & S.	49 32	14 27					
N.	29 7	14 45					
S.	36 4	14 54	14 37	- 0 17	14 20		11.
N. & S.	49 33	14 26					
Grs. 3 5	51 24	14 30					
3 0	42 0	14 42					
2 5	33 55	14 42					
2 0	26 56	14 21	14 09	- 0 17	13 92		12.
Def. N.	29 39	14 09					
S.	36 51	14 04					
N. & S.	49 46	14 11					
N.	30 0	13 84	13 86	- 0 17	13 69		14.
S.	37 12	13 81					
N. & S.	50 15	13 91					
Grs. 3 5	53 54	13 83					
3 0	41 25	13 79					
2 5	35 13	13 95	13 67	- 0 20	13 47		15.
2 0	27 40	13 86					
Def. N.	30 14	13 68					
S.	37 28	13 63					
N. & S.	50 44	13 70					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1874. Mar. 16.	SOUTH. 39° 13'	EAST. 142° 56'	SOUTH. 68° 50'	+ 0° 3'	N.E. <sup>b</sup> E. $\frac{1}{2}$ E.	- 0° 20'	- 69° 7'	+ 1° 25'	- 1° 25'	SOUTH. 69° 7'
22.	37° 50'	144° 50'	67° 1'	- 0° 5'	...	...	...	...	...	67° 6'
"	"	"	66° 31'	- 0° 35'	...	...	...	...	...	67° 6'
April. 1.	37° 54'	144° 55'	68° 46'	- 0° 3'	S. $\frac{3}{4}$ E.	+ 0° 52'	- 67° 57'	+ 1° 24'	- 1° 28'	68° 1'
"	38° 10'	144° 56'	68° 22'	- 0° 35'	S. $\frac{3}{4}$ E.	+ 0° 52'	- 68° 5'	+ 1° 18'	- 1° 26'	68° 13'
2.	39° 13'	146° 32'	68° 17'	- 0° 3'	N.E. <sup>b</sup> E.	- 0° 24'	- 68° 44'	+ 1° 18'	- 1° 26'	68° 52'
3.	38° 24'	148° 51'	67° 27'	- 0° 3'	N.E. <sup>b</sup> N.	- 0° 42'	- 68° 12'	+ 1° 19'	- 1° 27'	68° 20'

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30° 28'	13.54	13.59	- 0.20	13.39		1874.
S.	37 52	13.37					
N. & S.	51 2	13.57					
Gr. 3.5	54 48	13.68					Mar. 16.
3.0	44 55	13.67					
2.5	36 5	13.66					
2.0	28 30	13.49					
Def. N.	31 2	...	...	...	13.173	Melbourne, Magnetic Observy.	22.
S.	38 13						
N. & S.	51 57						
Gr. 3.5	58 3						
3.0	47 6						
2.5	37 39						
2.0	29 15						
1.5	22 0						
1.0	15 0						
Def. N.	23 51	...	...	...	13.173	Mounted circle C. 13" needle B.	"
S.	25 58						
N. & S.	41 25						
Gr. 3.5	53 48						
3.0	43 28						
2.5	34 45						
2.0	27 27						
1.5	20 9						
1.0	13 15						
Def. N.	23 11	13.55	13.66	- 0.32	13.34	Hobson's bay.	April 1.
S.	25 2	13.71					
N. & S.	40 36	13.55					
Gr. 3.0	41 35	13.65					
2.5	33 40	13.54	13.54	- 0.28	13.26	Mounted circle I. 27 needle B.	..
2.0	26 47	13.48					
Def. N.	30 47	13.34					
S.	37 20	13.72					
N. & S.	51 2	13.57	13.56	- 0.22	13.34	Off Monceur island.	2.
N.	30 46	13.35					
S.	37 18	13.74					
N. & S.	50 58	13.59					
N.	31 3	13.17	13.38	- 0.18	13.20		3.
S.	37 29	13.62					
N. & S.	51 28	13.38					
Gr. 3.5	57 27	13.26					
3.0	46 20	13.34	13.34				
2.5	36 26	13.55					
2.0	28 51	13.34					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R. ALT.	$\frac{1}{d}$ .	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
April 5.	36° 13'	150° 15'	64° 31'	- 0° 3'	N.	- 0° 51'	°	°	°	°
			65° 42'	- 0° 3'	N.E.	- 0° 33'				
			65° 50'	- 0° 3'	E.	+ 0° 10'				
			65° 17'	- 0° 3'	S.E.	+ 0° 42'	- 64 57	+ 1 40	- 1 40	64 57
			64° 35'	- 0° 3'	S.	+ 0° 51'				
			64° 4'	- 0° 3'	S.W.	+ 0° 41'				
			64° 41'	- 0° 3'	W.	+ 0° 10'				
			65° 8'	- 0° 3'	N.W.	- 0° 28'				
"	"	"	63° 24'	- 0° 35'	N.	- 0° 51'				
			63° 46'	- 0° 35'	N.E.	- 0° 33'				
			64° 42'	- 0° 35'	E.	+ 0° 10'				
			64° 52'	- 0° 35'	S.E.	+ 0° 42'	- 65 5	+ 1 40	- 1 40	65 5
			65° 16'	- 0° 35'	S.	+ 0° 51'				
			65° 28'	- 0° 35'	S.W.	+ 0° 41'				
			65° 10'	- 0° 35'	W.	+ 0° 10'				
			64° 20'	- 0° 35'	N.W.	- 0° 28'				
6.	33° 52'	151° 20'	63° 22'	- 0° 3'	N.	- 0° 51'	- 64 16	+ 1 39	- 1 39	64 16
22.	33° 52'	151° 15'	62° 42'	- 0° 3'	...	...	...	...	...	62 45
23.	"	"	62° 4'	- 0° 41'	...	...	...	...	...	62 45

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30° 54'	13.26	...	-0.25	12.92	Swinging off Montague island. Rejected in favour of C. 13 B.	1874. } April 5.
N.	31 5	13.15	...	-0.19			
N.	31 10	13.10	...	-0.25			
N.	31 5	13.15	...	-0.28			
N.	30 53	13.27	...	-0.32			
N.	30 39	13.42	...	-0.31			
N.	30 56	13.24	...	-0.25			
N.	30 59	13.21	...	-0.22			
N.	23 38	13.28	...	-0.25	12.92	Mounted circle C. 13 needle B. Swinging off Montague island.	}
N.	23 37	13.29	...	-0.19			
N.	23 48	13.19	...	-0.25			
N.	23 42	13.24	...	-0.28			
N.	23 48	13.19	...	-0.32			
N.	23 52	13.14	...	-0.31			
N.	23 50	13.17	...	-0.25			
N.	24 16	12.93	...	-0.22			
N.	31 46	12.72	12.91	-0.25	12.66	Mounted circle I. 27 needle B. Off Port Jackson.	}
S.	38 25	13.04					
N. & S.	52 19	13.02					
Gr. 3.0	48 31	12.88					
2.0	29 59	12.88					6.
Def. N.	32 2	...	...	...	12.605	Sydney, Garden island.	22.
S.	39 16						
N. & S.	53 16						
Gr. 3.5	62 45						
3.0	50 22						
2.5	39 37						
2.0	31 2						
1.5	23 13						
1.0	15 41						
Def. N.	24 45	...	...	...	12.605	Mounted circle C. 13 needle B.	} 23.
S.	26 20						
N. & S.	42 7						
Gr. 3.5	57 20						
3.0	46 30						
2.5	37 26						
2.0	29 30						
1.5	21 42						
1.0	14 27						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
June 12.	33° 51'	151° 25'	63° 16'	- 0° 40'	E. bs.	+ 0° 20'	- 63° 36'	+ 1° 34'	- 1° 39'	63° 41'
13.	34 15	151 54	63 50	- 0 36	W.	+ 0 10	- 64 16	+ 1 28	- 1 39	64 27
16.	34 20	155 6	62 57	- 0 41	S.W.	+ 0 41	- 62 57	+ 1 35	- 1 43	63 5
18.	34 39	156 9	63 13	- 0 40	E.	+ 0 10	- 63 43	+ 1 31	- 1 41	63 53
19.	36 33	157 50	64 2	- 0 34	S.E. bE.	+ 0 37	- 63 59	+ 1 32	- 1 40	64 7
20.	36 58	160 26	64 28	- 0 31	E.	+ 0 10	- 64 49	+ 1 27	- 1 37	64 59
21.	37 56	163 30	64 34	- 0 28	E.	+ 0 10	- 64 52	+ 1 27	- 1 37	65 2
22.	38 40	166 17	65 10	- 0 20	N.E. bE. $\frac{1}{2}$ E.	- 0 18	- 65 48	+ 1 21	- 1 34	66 1
July 1.	41 17	174 48	64 54	- 0 20	...	...	...	...	..	65 14
6.	"	"	65 3	- 0 11	...	...	...	...	...	65 14

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	23 40	13.13	13.21	- 0.25	12.96	Off Sydney heads.	1874.
s.	25 20	13.41					June 12.
N. & s.	41 9	13.10					
N.	24 4	12.89	12.96	- 0.25	12.71		13.
s.	26 11	12.92					
N. & s.	41 33	12.91					
Grs. 2.0	27 48	13.12	12.84	- 0.30	12.54		16.
Def. N.	24 0	12.92					
s.	26 23	12.80					
N. & s.	41 45	12.81	12.82	- 0.25	12.57		18.
N.	24 11	12.82					
s.	26 7	12.95					
N. & s.	42 3	12.66	12.82	- 0.25	12.57		18.
Grs. 3.0	45 32	12.71					
2.0	27 47	13.13					
1.5	20 55	12.89	12.90	- 0.27	12.63		19.
1.0	14 0	12.61					
Def. N.	24 25	12.69					
s.	25 50	13.11	12.97	- 0.25	12.72		20.
N. & s.	41 33	12.89					
N.	24 20	12.73					
s.	26 8	12.94	12.97	- 0.25	12.72		20.
N. & s.	41 37	12.86					
Grs. 3.0	44 43	12.90					
2.5	35 25	13.11	12.72	- 0.25	12.47		21.
2.0	27 49	13.11					
1.5	20 48	12.96					
1.0	13 12	12.97	12.81	- 0.22	12.59		22.
Def. N.	24 44	12.52					
s.	26 12	12.89					
N. & s.	41 51	12.75	12.81	- 0.22	12.59		22.
N.	24 42	12.54					
s.	25 50	13.10					
N. & s.	41 46	12.79	...	...	12.599	Wellington, Armourer bay.	July 1.
N.	24 32	...					
s.	26 42	...					
N. & s.	42 5	...	...	...	12.599	Mounted circle C. 13 needle A.	6.
Grs. 3.0	45 37	...					
2.5	36 44	...					
2.0	28 37	...	...	...	12.599	Mounted circle C. 13 needle A.	6.
1.5	21 9	...					
1.0	14 1	...					
Def. N.	24 27	...	...	...	12.599	Mounted circle C. 13 needle A.	6.
s.	26 47	...					
N. & s.	42 5	...					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1874. July 7.	SOUTH. 41° 27'	EAST. 174° 51'	SOUTH. 66° 1'	- 0° 20'	S.E.	+ 0° 42'	- 65° 39'	+ 1° 22'	- 1° 35'	SOUTH. 65° 52'
„	41 40	175 11	65 30	- 0 21	E.	+ 0 10	- 65 41	+ 1 22	- 1 35	65 54
8.	40 16	177 26	63 20	- 0 24	N. <sup>b</sup> E.	- 0 48	- 64 32	+ 1 25	- 1 38	64 45
9.	39 19	178 35	61 50	- 0 26	N.	- 0 52	- 63 8	+ 1 31	- 1 42	63 19
10.	37 47	179 31	59 46	- 0 29	N. <sup>b</sup> E.	- 0 50	- 61 5	+ 1 42	- 1 47	61 10
11.	36 8	WEST. 178 35	59 28	- 0 30	E. <sup>b</sup> N.	+ 0 1	- 59 57	+ 1 50	- 1 50	59 57
12.	34 58	178 22	57 21	- 0 33	N.	- 0 54	- 58 51	+ 1 51	- 1 52	58 52
13.	31 49	177 46	53 12	- 0 40	N. <sup>b</sup> W. <sub>2</sub>	- 0 47	- 54 39	+ 2 13	- 1 59	54 52

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	24 17'	12.71	12.72	- 0.28	12.44	Off Cape Palliser. Mounted circle C. 13 needle B.	1874.
S.	26 3	12.90					} July 7.
N. & S.	41 31	12.81					
Gr. 3.0	45 26	12.64					
2.5	36 44	12.57					
2.0	27 54	12.94	12.74	- 0.25	12.49	Off Cape Palliser.	8.
1.5	20 52	12.78					}
1.0	14 22	12.31					
Def. N.	24 42	12.49					
S.	25 56	12.97					
N. & S.	41 38	12.75	12.60	- 0.25	12.35		}
N.	24 35	12.54					
S.	26 24	12.70					
N. & S.	42 0	12.57					
Gr. 3.0	45 17	12.67					
2.0	28 52	12.54	12.47	- 0.25	12.22		9.
Def. N.	24 40	12.49					
S.	26 35	12.60					
N. & S.	42 22	12.39					
Gr. 2.5	36 56	12.51					
2.0	29 30	12.30	12.18	- 0.25	11.93		10.
1.5	21 22	12.50					
1.0	14 10	12.50					
Def. N.	25 23	12.13					
S.	27 3	12.34					
N. & S.	42 52	12.15	11.98	- 0.22	11.76		11.
Gr. 2.5	38 2	12.20					
2.0	30 10	12.05					
1.5	21 53	12.22					
1.0	14 34	12.15					
Def. N.	25 49	11.91	11.92	- 0.25	11.67	Rolling heavily.	12.
S.	27 41	12.01					
N. & S.	43 14	11.98					
Gr. 2.5	38 15	12.14					
2.0	29 46	12.20					
1.5	22 26	11.93	11.51	- 0.24	11.27		13.
1.0	15 12	11.67					
Def. N.	25 59	11.83					
S.	27 38	12.02					
N. & S.	43 24	11.90					
N.	26 43	11.47	11.51	- 0.24	11.27		
S.	28 22	11.65					
N. & S.	44 15	11.53					
Gr. 2.0	31 33	11.57	11.51	- 0.24	11.27		
1.0	15 38	11.34					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1874. July 15.	SOUTH. 28° 21'	WEST. 177° 34'	SOUTH. 49° 46'	- 0° 44'	N.E. <sup>b</sup> N.	- 0° 39'	- 51° 9'	+ 2° 30'	- 2° 3'	SOUTH. 50° 42'
16.	26 25	174 33	46 11	- 0 50	N.E. <sup>b</sup> N.	- 0 39	- 47 40	+ 2 47	- 2 4	46 57
17.	24 56	172 58	43 45	- 0 56	N. <sup>3</sup> / <sub>4</sub> W.	- 0 51	- 45 32	+ 2 57	- 2 4	44 39
18.	23 4	173 41	42 2	- 0 57	N.W.	- 0 38	- 43 37	+ 3 5	- 2 3	42 35
19.	21 17	174 43	41 12	- 0 58	W. <sup>b</sup> N.	+ 0 9	- 42 1	+ 3 13	- 2 2	40 50
20.	21 7	175 8	39 13	- 1 18	...	...	...	...	...	40 31
"	"	"	40 10	- 0 21	...	...	...	...	...	40 31
23.	20 15	177 42	39 49	- 1 0	W. <sup>b</sup> N. <sup>1</sup> / <sub>4</sub> N.	+ 0 5	- 40 44	+ 3 17	- 2 4	39 28
24.	19 18	EAST. 179 42	37 45	- 1 4	N. <sup>1</sup> / <sub>2</sub> W.	- 0 57	- 39 46	+ 3 23	- 2 0	38 23

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	27 38	11.10	11.00	- 0.22	10.78		1874.
S.	29 36	11.04					July 15.
N. & S.	45 23	11.04					
Grs. 2.5	43 5	11.00					
2.0	33 1	11.11					
1.5	24 31	10.97					
1.0	16 34	10.72					
Def. N.	28 26	10.69	10.77	- 0.24	10.53		16.
S.	29 59	10.84					
N. & S.	45 57	10.79					
N.	28 39	10.59					
S.	30 43	10.52	10.59	- 0.25	10.34		17.
N. & S.	46 26	10.60					
Grs. 2.5	45 20	10.57					
2.0	35 9	10.52					
1.5	25 30	10.58					
1.0	16 26	10.80					
Def. N.	29 39	10.15	10.20	- 0.24	9.96		18.
S.	31 24	10.22					
N. & S.	47 25	10.22					
Grs. 2.5	46 56	10.29					
2.0	36 40	10.14	10.03	- 0.22	9.81		19.
Def. N.	29 55	10.00					
S.	31 37	10.11					
N. & S.	48 3	9.99	...	...	9.794	Tongatabu.	20.
N.	30 27	...					
S.	32 17	...					
N. & S.	48 37	...					
Grs. 2.5	49 56	...					
2.0	38 21	...					
1.5	27 45	...	...	...	9.794	Mounted circle C. 13 needle A.	"
1.0	18 12	...					
Def. N.	32 7	...					
N.	29 47	10.03					
S.	32 4	9.84					
N. & S.	47 46	10.06					
Grs. 2.5	49 5	9.90	9.95	- 0.16	9.79	Mounted circle C. 13 needle B.	23.
2.0	37 47	9.83					
1.5	26 55	10.13					
1.0	17 36	10.00					
Def. N.	29 46	10.04	10.06	- 0.16	9.90	South of Matuku island.	24.
S.	31 30	10.10					
N. & S.	47 46	10.05					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean X.	R A.H.	1 d.	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
July 26.	19° 10'	178° 22'	39° 28'	-1° 11'	W.N.W.	-9 6	-49° 45'	+3° 14'	-2° 1'	39° 32'
27.	19 3	178 10	37 23	-1 14	...	...	...	...	...	38 37
30.	17 41	178 49	35 18	-1 24	...	...	...	...	...	36 42
"	17 41	178 49	36 19	-0 23	...	...	...	...	...	36 42
Aug. 6.	19 3	178 10	38 22	-0 15	...	...	...	...	...	38 37
10-11.	19 15	177 40	38 0	-1 13	N.	-1 0	-40 9	+3 8	-1 43	38 44
			37 55	-1 13	N.N.E.	-0 56				
			38 34	-1 13	N.E.	-0 21				
			38 21	-1 13	E.N.E.	+0 1				
			39 9	-1 13	E.	+0 25				
			39 37	-1 13	E.S.E.	+0 42				
			40 0	-1 13	S.E.	+0 51				
			39 32	-1 13	S.S.E.	+1 0				
			39 44	-1 13	S.	+1 0				
			40 4	-1 13	S.S.W.	+1 0				
			40 8	-1 13	S.W.	+0 55				
			40 26	-1 13	W.S.W.	+0 42				
			39 34	-1 13	W.	+0 24				
			39 51	-1 13	W.N.W.	-0 6				
			38 0	-1 13	N.W.	-0 39				
			38 8	-1 13	N.N.W.	-0 49				

Total Force (British Units) ( $\phi$ ).

Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.	REMARKS.	Date.
							1874.
Def. N.	30 31	9.70	9.87	- 0.20	9.67	Off Kandavu island, Fiji. Rolling heavily.	{ July 26.
s.	31 46	9.95					
N. & s.	48 0	9.95					
N.	30 15	...	...	...	9.765	Kandavu.	27
s.	31 59	...	...	...	...	...	...
N. & s.	48 25	...	...	...	...	...	...
Grs.	2.5	49 53	...	...	...	...	...
	2.0	37 42	...	...	...	...	...
	1.5	28 9	...	...	...	...	...
	1.0	17 49	...	...	...	...	...
Def. N.	30 54	...	...	...	9.458	Levuka, Fiji.	30
s.	32 45	...	...	...	...	...	...
N. & s.	49 12	...	...	...	...	...	...
Grs.	2.5	51 47	...	...	...	...	...
	2.0	38 55	...	...	...	...	...
	1.5	28 41	...	...	...	...	...
	1.0	19 24	...	...	...	...	...
Def. N.	31 2	...	...	...	9.458	" Mounted circle C. 13 needle A.	{ "
s.	32 46	...	...	...	...		
N. & s.	49 15	...	...	...	...		
...	...	...	...	...	9.765	Kandavu. Mounted circle C. 13 needle B.	{ Aug. 6
N.	29 9	10.25	...	- 0.30			
N.	29 22	10.16	...	- 0.25			
N.	29 21	10.16	...	- 0.20			
N.	29 56	9.92	...	- 0.17			
N.	29 42	10.02	...	- 0.16			
N.	29 47	9.98	...	- 0.18			
N.	30 27	9.71	...	- 0.21			
N.	29 44	10.00	...	- 0.21	Swinging off Kandavu.	10-11.	
N.	29 46	9.99	...	- 0.21			
N.	29 48	9.97	...	- 0.19			
N.	29 54	9.93	...	- 0.16			
N.	29 46	9.99	...	- 0.15			
N.	29 42	10.02	...	- 0.16			
N.	29 39	10.04	...	- 0.20			
N.	29 28	10.11	...	- 0.26			
N.	29 16	10.20	...	- 0.26			

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{N^2H}$ .	$\frac{1}{d}$ .	Dip.
1874. Aug. 13.	SOUTH. 19° 0'	EAST. 176° 56'	SOUTH. 40° 18'	-1° 13'	s.w.'s.	+0° 58'	-40° 33'	+3° 5'	-1° 43'	SOUTH. 39° 11'
14.	19 1	175 9	39 41	-1 13	w.s.w.	-0 6	-41 0	+3 4	-1 43	39 39
15.	18 29	173 46	39 3	-1 14	w.	+0 24	-39 53	+3 6	-1 42	38 29
16.	18 7	172 6	39 7	-1 14	w. $\frac{1}{2}$ s.	+0 16	-40 5	+3 5	-1 42	38 42
17.	17 29	169 12	38 37	-1 15	w. $\frac{1}{2}$ s.	+0 16	-39 36	+3 5	-1 42	38 13
19.	16 54	165 54	39 1	-1 15	w.	+0 24	-39 52	+3 4	-1 42	38 30
20.	16 31	163 2	38 54	-1 16	w.	+0 24	-39 46	+3 2	-1 42	38 26

Total Force (British Units ( $\phi$ )).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
							1871.
Def. N.	29 33	9.95	9.86	- 0.17	9.69		Aug. 13.
S.	31 33	9.88					
N. & S.	47 48	9.89					
Grs. 2.5	49 11	9.92					
2.0	37 37	9.81					
1.5	27 42	9.79	9.96	- 0.20	9.76		14.
1.0	17 43	9.82					
Def. N.	29 28	9.97					
S.	31 35	9.86					
N. & S.	47 29	10.01					
Grs. 2.5	49 1	9.95	9.92	- 0.16	9.76		15.
2.0	37 33	9.83					
1.5	27 13	9.95					
1.0	17 7	10.15					
Def. N.	29 52	9.80	9.99	- 0.16	9.83		16.
S.	31 44	9.78					
N. & S.	47 44	9.91					
Grs. 2.5	48 48	9.98					
2.0	36 40	10.03					
1.5	27 8	9.98	10.10	- 0.16	9.94		17.
1.0	17 27	9.96					
Def. N.	29 11	10.07					
S.	31 35	9.86					
N. & S.	47 24	10.02					
Grs. 2.5	48 32	10.02	10.01	- 0.16	9.85		19.
Def. N.	29 7	10.09					
S.	31 28	9.89					
N. & S.	47 33	9.96					
Grs. 2.5	47 58	10.11					
1.5	26 43	10.12	10.04	- 0.16	9.88		20.
1.0	16 40	10.42					
Def. N.	29 35	9.89					
S.	31 45	9.74					
N. & S.	47 31	9.95					
Grs. 2.5	48 35	10.01	10.04	- 0.16	9.88		20.
2.0	35 33	10.30					
1.5	26 46	10.10					
1.0	17 15	10.08					
Def. N.	29 28	9.92	10.04	- 0.16	9.88		20.
S.	31 12	9.99					
N. & S.	47 34	9.93					
Grs. 2.5	48 35	10.01					
1.5	27 13	9.95					
1.0	16 38	10.44					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1874. Aug. 21.	SOUTH. 16° 0'	EAST. 161° 5'	SOUTH. 38° 42'	-1° 16'	w. $\frac{1}{2}$ N.	+0° 16'	-39° 42'	+3° 2'	-1° 42'	SOUTH. 38° 22'
22.	15 21	159 3	37 58	-1 17	w. $\frac{1}{2}$ N.	+0 9	-39 6	+3 4	-1 42	37 44
23.	14 50	155 18	37 33	-1 17	w. $\frac{1}{2}$ N.	+0 15	-38 35	+3 2	-1 41	37 14
24.	14 4	153 36	36 47	-1 18	w. $\frac{1}{2}$ N.	+0 9	-37 56	+3 4	-1 41	36 33
25.	13 52	152 1	36 55	-1 19	w. $\frac{1}{2}$ N.	+0 9	-38 5	+3 4	-1 41	36 42
26.	13 44	151 9	37 4	-1 20	w. $\frac{1}{2}$ N.	+0 9	-38 15	+3 1	-1 41	36 55

Total Force (British Units ( $\phi$ )).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
							1874.
Def. N.	29 35	9.87	10.00	- 0.16	9.84		Aug 21.
S.	31 12	9.98					
N. & S.	17 21	10.00					
Grs. 2.5	17 55	10.12					
2.0	36 27	10.08					
1.5	27 30	9.85	10.11	- 0.16	9.95		22.
1.0	17 16	10.07					
Def. N.	29 20	9.96					
S.	31 13	9.96					
N. & S.	47 14	10.04					
Grs. 2.5	47 56	10.11	10.02	- 0.16	9.86		23.
2.0	36 16	10.13					
1.5	26 30	10.20					
1.0	16 47	10.35					
Def. N.	29 21	9.95	9.93	- 0.15	9.78		24.
S.	31 12	9.97					
N. & S.	47 26	9.96					
Grs. 2.5	47 51	10.13					
2.0	36 18	10.12	9.92	- 0.15	9.77		25.
1.5	26 52	10.07					
1.0	17 25	9.98					
Def. N.	29 34	9.85					
S.	31 20	9.90	9.96	- 0.15	9.81		26.
N. & S.	47 30	9.92					
Grs. 2.5	48 22	10.05					
2.0	36 48	10.00					
1.5	26 57	10.00	9.92	- 0.15	9.77		25.
1.0	17 42	9.83					
Def. N.	29 25	9.91					
S.	31 22	9.88					
N. & S.	47 29	9.92	9.96	- 0.15	9.81		26.
Grs. 2.5	48 28	10.03					
2.0	36 37	10.04					
1.5	27 30	9.85					
1.0	17 44	9.81	9.96	- 0.15	9.81		26.
Def. N.	29 26	9.89					
S.	31 13	9.94					
N. & S.	47 27	9.92					
Grs. 2.5	48 18	10.06					
2.0	36 30	10.07	9.96	- 0.15	9.81		26.
1.5	27 4	10.00					
1.0	17 37	9.87					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{\theta}$ .	Dip.
1874.	SOUTH.	EAST.	SOUTH.							SOUTH.
Aug. 27.	13° 11'	149° 24'	36° 55'	-1° 20'	w.	+0° 23'	-37° 52'	+3° 2'	-1° 41'	36° 31'
28.	12 43	147 0	36 13	-1 21	w.	+0 22	-37 12	+3 6	-1 40	35 16
29.	12 8	145 10	35 50	-1 22	w.	+0 22	-36 50	+3 5	-1 39	35 24
31.	11 47	143 36	35 52	-1 23	s.w. $\frac{1}{4}$ w.	+0 51	-36 24	+3 7	-1 38	34 55
Sept. 1.	11 12	142 57	33 7	-1 24	s.s.w. $\frac{3}{4}$ w.	+0 45	-33 46	+3 18	-1 34	32 2
2.	10 41	142 36	31 8	-1 24	...	...	...	...	...	32 32
3.	"	"	23 21	-0 20	...	...	...	...	...	32 32
9.	10 33	141 45	33 4	-1 24	w. $\frac{1}{2}$ s. $\frac{1}{2}$ N.	+0 1	-34 27	+3 9	-1 35	32 53

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1874.
Def. n.	29 34	9.83	9.96	- 0.16	9.80		Aug. 27.
s.	31 26	9.84					
n. & s.	47 33	9.88					
Grs. 2.5	49 10	9.92					
2.0	36 50	9.99					
1.5	27 7	9.98	9.91	- 0.16	9.75		28.
1.0	17 38	9.87					
Def. n.	29 38	9.79					
s.	31 19	9.88					
n. & s.	47 33	9.88					
Grs. 2.5	48 17	9.98	9.80	- 0.16	9.61		29.
2.0	36 43	10.00					
Def. n.	29 33	9.82					
s.	31 31	9.79					
n. & s.	47 47	9.80					
n.	29 48	9.70	9.74	- 0.15	9.59	10 miles N.E. of Sir Charles Hardy island.	31.
s.	31 37	9.73					
n. & s.	47 48	9.78					
n.	29 34	9.78					
s.	31 22	9.84					
n. & s.	47 38	9.83	9.87	- 0.26	9.61	Off Cairncross island.	Sept. 1.
Grs. 2.5	49 22	9.89					
2.0	36 51	9.99					
Def. n.	30 9	...	...	...	9.527	Cape York, Australia.	2.
s.	32 3	...					
n. & s.	48 30	...					
Grs. 2.5	52 24	...					
2.0	39 6	...					
1.5	28 8	...	...	...	9.527	" " " " Mounted circle C. 13 needle A.	3.
1.0	18 16	...					
Def. n.	30 27	...					
s.	32 7	...					
n. & s.	48 30	...					
Grs. 2.5	50 44	...	9.70	- 0.20	9.50	10 miles W. of Booby island. Mounted circle C. 13 needle B.	9.
2.0	37 27	...					
1.5	27 34	...					
1.0	17 57	...					
Def. n.	29 43	9.62	9.70	- 0.20	9.50	10 miles W. of Booby island. Mounted circle C. 13 needle B.	9.
s.	31 34	9.67					
n. & s.	48 0	9.68					
Grs. 2.5	49 55	9.82					
2.0	37 54	9.74					
1.5	27 32	9.67	9.70	...	...		
1.0	17 44	9.70					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index. Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1874. Sept. 10.	SOUTH. 9° 57'	EAST. 139° 29'	SOUTH. 32° 28'	-1° 23'	w. <sup>b</sup> N.	+0° 8'	-33° 43'	+3° 12'	-1° 34'	SOUTH. 32° 5'
11.	9 30	137 35	31 26	-1 23	N.W. <sup>b</sup> W.	-0 21	-33 10	+3 13	-1 33	31 30
12.	8 59	136 16	30 52	-1 23	w. <sup>b</sup> N.	+0 7	-32 8	+3 16	-1 31	30 23
13.	8 14	135 5	28 30	-1 22	N.	-0 57	-30 49	+3 19	-1 28	28 58
14.	7 12	134 17	26 57	-1 21	N.W. <sup>b</sup> N.	-0 42	-29 0	+3 31	-1 24	26 53
16.	5 45	134 8	24 1	-1 19	N.E.	-0 39	-24 59	+3 38	-1 13	22 34
17.	5 45	134 14	22 44	-1 20	...	...	...	...	...	24 4

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force		
Def. N.	29 48	9.58	9.64	- 0.15	9.49	Sept. 19.	
S.	31 44	9.59					
N. & S.	48 12	9.61					
Grns. 2.5	51 2	9.67					
2.0	37 56	9.73					
1.5	27 40	9.63					
1.0	17 49	9.65					
Def. N.	29 34	9.66	9.67	- 0.23	9.44	11.	
S.	31 35	9.64					
N. & S.	48 3	9.66					
Grns. 2.5	51 0	9.67					
2.0	38 8	9.69					
1.5	27 22	9.72					
Def. N.	29 57	9.49					9.56
S.	31 54	9.49					
N. & S.	48 20	9.56					
Grns. 2.5	52 25	9.49					
2.0	38 43	9.57					
1.5	27 59	9.53					
1.0	17 36	9.77					
Def. N.	29 33	9.64	9.63	- 0.30	9.33	13.	
S.	31 30	9.65					
N. & S.	48 21	9.55					
Grns. 2.0	37 56	9.73					
1.5	27 40	9.63					
Def. N.	29 51	9.51	9.47	- 0.26	9.21	14.	
S.	32 0	9.42					
N. & S.	48 33	9.48					
Grns. 2.5	52 18	9.50					
2.0	39 5	9.49					
1.5	28 17	9.43					
1.0	18 12	9.46					
Def. N.	30 29	9.23	9.25	- 0.20	9.05	16.	
S.	32 22	9.27					
N. & S.	49 14	9.26					
N.	31 2	...	...	...	9.000	Dobbo island—Arru islands.	17.
S.	33 3						
N. & S.	50 4						
Grns. 2.5	56 15						
2.0	41 27						
1.5	29 37						
1.0	18 56						

Date.	Geographical Position.		Inclination or Dip ( $^{\circ}$ ).							
	Latitude.	Longitude.	$\theta^{\circ}$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R AHE.	1 d.	Dip.
1874. Sept. 24.	SOUTH. $5^{\circ} 22'$	EAST. $133^{\circ} 17'$	SOUTH. $23^{\circ} 40'$	$-1^{\circ} 20'$	N.W. <sup>b</sup> N.	$-0^{\circ} 41'$	$-25^{\circ} 41'$	$+3^{\circ} 29'$	$-1^{\circ} 16'$	SOUTH. $23^{\circ} 28'$
27.	5 44	132 2	24 35	-1 22	N.W.	-0 33	-26 30	+3 24	-1 18	24 24
28.	5 29	130 8	25 5	-1 24	W. <sup>b</sup> S.	+0 25	-26 4	+3 25	-1 17	23 56
29.	4 42	129 55	21 44	-1 24	N.E. <sup>b</sup> N.	-0 44	-23 52	+3 27	-1 11	21 36
Oct. 4.	3 47	128 5	20 40	-1 27	N.	-0 55				
			20 57	-1 36	N.N.E.	-0 47				
			20 55	-1 41	N.E.	-0 41				
			21 41	-1 41	E.N.E.	-0 14				
			21 8	-1 41	E.	+0 14				
			22 31	-1 41	E.S.E.	+0 35				
			22 36	-1 27	S.E.	+0 44				
			22 33	-1 27	S.S.E.	+0 58				
			22 43	-1 27	S.	+0 57	23 12	+3 22	-0 58	20 48
			22 43	-1 27	S.S.W.	+0 51				
			22 52	-1 27	S.W.	+0 50				
			21 35	-1 45	W.S.W.	+0 32				
			22 6	-1 27	W.	+0 14				
			21 40	-1 27	W.N.W.	-0 5				
			21 2	-1 27	N.W.	-0 32				
			20 36	-1 27	N.N.W.	-0 51				
					N.					
					S.					

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1871.
Def. N.	30 12	9.26	9.29	- 0.26	9.03		Sept. 21.
S.	32 9	9.25					
N. & S.	18 54	9.30					
Gr. 2.5	54 13	9.24					
2.0	40 0	9.31					
1.5	28 37	9.31	9.25	- 0.26	8.99		27.
1.0	18 32	9.22					
Def. N.	30 15	9.21					
S.	32 6	9.26					
N. & S.	48 56	9.26					
Gr. 2.5	54 4	9.29	8.98	- 0.16	8.82		28.
2.0	40 5	9.25					
1.5	28 49	9.26					
1.0	18 33	9.22					
Def. N.	30 51	8.96					
S.	32 51	8.98	9.15	- 0.20	8.95	8 miles s.w.'s. of Banda island.	29.
N. & S.	49 30	9.08					
Gr. 1.0	19 14	8.90					
Def. N.	30 24	9.13					
S.	32 32	9.09					
N. & S.	49 16	9.15	8.71	- 0.11	8.71	Swinging off Amboina.	Oct. 1.
Gr. 2.5	54 58	9.16					
2.0	40 45	9.17					
1.5	29 0	9.19					
Def. N.	30 22	9.07					
N.	30 35	8.99	8.89	- 0.12	8.89		
N.	30 36	8.98					
N.	30 35	8.99					
N.	31 12	8.76					
N.	31 0	8.83					
N.	31 15	8.74	8.92	- 0.14	8.92		
N.	31 22	8.69					
N.	30 44	8.93					
N.	31 7	8.79					
N.	31 8	8.78					
N.	30 50	8.89	9.01	- 0.29	9.01		
N.	31 3	8.81					
N.	30 46	8.92					
N.	30 31	9.01					
N.	30 17	9.10					
S.	32 18	9.09	8.92	- 0.30	8.92		
S.	32 47	8.92					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1874. Oct. 8.	SOUTH. 3° 42'	EAST. 128° 9'	SOUTH. 18° 50'	-1° 26'	...	...	...	...	...	SOUTH. 20° 16'
"	"	"	19 59	-0 17	...	...	...	...	...	20 16
11.	2 54	127 11	18 32	-1 26	N.	-0 51	-20 49	+3 26	-0 67	18 14
12.	1 46	127 5	16 33	-1 24	N. <sup>b</sup> E. <sub>2</sub> E.	-0 44	-18 41	+3 31	-0 45	15 55
13.	0 22	126 56	13 41	-1 21	N. <sup>b</sup> W.	-0 44	-15 46	+3 36	-0 37	12 47
14.	NORTH. 0 43	126 41	12 33	-1 18	E. <sup>b</sup> N. <sub>4</sub> N.	-0 6	-13 57	+3 37	-0 32	10 52
17.	0 58	127 22	12 28	-1 16	W. <sub>2</sub> S.	+0 12	-13 32	+3 37	-0 31	10 26
18.	0 58	126 23	11 45	-1 13	N.W.	-0 26	-13 24	+3 38	-0 30	10 16

Defectors or Grains.	Angle.	Total Force (British Units) ( $\phi$ ).				REMARKS.	Date.
		$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. n.	30 57	...	...	...	8.838	Amboina.	1874.
s.	33 0						Oct. 8.
n. & s.	50 2						
Grs. 2.5	58 11						
2.0	42 50						
1.5	30 21						
1.0	19 27						
...	...	...	...	...	...	Mounted circle C. 13 needle A.	"
Def. n.	30 0	9.18	9.05	- 0.26	8.79	Mounted circle C. 13 needle B.	11.
s.	32 10	9.10					
n. & s.	49 10	9.05					
Grs. 2.5	56 14	9.01					
2.0	41 3	9.03					
1.5	29 15	9.09					
1.0	19 0	8.96					
Def. n.	30 30	8.98	8.98	- 0.20	8.78		12.
s.	32 32	8.95					
n. & s.	49 28	8.94					
Grs. 2.0	41 3	9.03					
1.5	29 43	8.96					
1.0	19 8	8.90					
Def. n.	30 44	8.88	8.83	- 0.25	8.58		13.
s.	32 57	8.80					
n. & s.	49 55	8.79					
Grs. 2.5	58 42	8.76					
2.0	42 18	8.81					
1.5	29 53	8.91					
Def. n.	31 36	8.55	8.52	- 0.08	8.44		14.
s.	33 36	8.54					
n. & s.	50 51	8.50					
Grs. 2.5	61 52	8.49					
2.0	43 58	8.54					
1.5	31 26	8.52					
1.0	20 3	8.51					
Def. n.	31 50	8.44	8.42	+ 0.01	8.43		17.
s.	33 46	8.44					
n. & s.	51 3	8.39					
n.	31 3	8.71	8.61	- 0.15	8.46		18.
s.	33 21	8.59					
n. & s.	50 13	8.61					
Grs. 2.5	60 28	8.60					
2.0	43 55	8.55					
1.0	19 52	8.59					

Date.	Geographical Position.			Inclination or Dip ( $\theta$ ).						
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A'H.	$\frac{1}{\theta}$ .	Dip.
1874.	NORTH.	EAST.	SOUTH.							SOUTH.
Oct. 19.	2° 1'	125° 22'	9° 20'	-1° 9'	N.W. $\frac{1}{2}$ W.	-0° 11'	-10° 40'	+3° 38'	-0° 22'	7° 24'
20.	2 53	124 51	7 43	-1 5	N.E.	-0 26	-9 14	+3 40	-0 17	5 51
21.	3 57	124 5	5 26	-1 2	N.N.W.	-0 29	-6 57	+3 45	-0 10	3 22
22.	5 43	123 26	1 55	-0 54	N.W. $\frac{1}{2}$ N.	-0 24	-3 13	+3 46	+0 2	NORTH. 0 35
"	5 46	123 32	1 39	-0 52	N.W. $\frac{1}{2}$ N.	-0 22	-2 53	+3 46	+0 3	0 56
23.	6 48	122 25	0 6	-0 50	N.	-0 26	-1 25	+3 46	+0 6	2 27
			0 36	-0 50	N.E.	-0 18				
			0 20	-0 50	E.	+0 2				
			0 26	-0 50	S.E.	+0 20				
			0 57	-0 50	S.	+0 28				
			1 35	-0 50	S.W.	+0 20				
			0 19	-0 50	W.	+0 2				
			0 16	-0 50	N.W.	-0 18				
					N.					
					S.					
24.	6 55	122 4	NORTH. 3 26	-0 51	...	...	...	...	...	2 35

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	31 25	8.57	8.51	+0.10	8.61		1874.
s.	33 34	8.50					Oct. 19.
N. & s.	50 34	8.49					
Gr. 2.5	63 8	8.39					
2.0	44 24	8.47					
1.5	31 3	8.61	8.63	-0.15	8.48		20.
1.0	20 1	8.53					
Def. N.	31 25	8.56					
s.	33 15	8.61					
N. & s.	50 15	8.58					
Gr. 2.5	59 52	8.66	8.52	-0.28	8.24		21.
2.0	42 55	8.71					
Def. N.	31 22	8.57					
s.	33 32	8.48					
N. & s.	50 27	8.51					
Gr. 2.5	61 45	8.50	...	...	...		22.
2.0	43 25	8.63					
1.5	31 30	8.50					
1.0	20 11	8.46					
Def. N.	31 12	8.62	8.56	-0.20	8.36		"
s.	33 31	8.48					
N. & s.	50 24	8.50					
Gr. 2.5	60 53	8.57					
2.0	43 56	8.55					
1.5	30 53	8.65	...	...	8.34	Swinging in Basilan straits.	23.
1.0	20 1	8.53					
Def. N.	31 9	8.61					
N.	31 37	8.44					
N.	32 12	8.23					
N.	32 33	8.12					
N.	32 12	8.23					
N.	32 36	8.10					
N.	32 12	8.23					
N.	31 30	8.48					
s.	33 12	8.58					
s.	34 22	8.15					
N.	32 9	...	...	...	8.239	Samboangan.	24.
s.	34 8	...					
N. & s.	51 12	...					
Gr. 2.5	64 54	...					
2.0	45 15	...					
1.5	32 25	...	...	...	...		
1.0	20 34	...					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\text{At.}}$	$\frac{1}{d}$ .	Dip.
1874. Oct. 26.	NORTH. 7° 15'	EAST. 121° 15'	NORTH. 0° 31'	-0° 48'	N.	-0° 25'	-0° 42'	+3° 46'	+0° 3'	NORTH. 3° 7'
27.	8 30	121 55	3 19	-0 44	N.	-0 21	+ 2 14	+3 46	+0 14	6 14
28.	10 11	122 13	6 53	-0 40	N.E. <sup>b</sup> N.	-0 11	+ 6 2	+3 46	+0 23	10 11
31.	11 2	123 1	8 56	-0 49	N.E. <sup>b</sup> E. <sub>2</sub> <sup>1</sup> E.	-0 7	+ 8 0	+3 50	+0 29	12 19
Nov. 1.	11 21	123 20	9 48	-0 53	N. <sup>b</sup> W.	-0 9	+ 8 46	+3 50	+0 30	13 6
2.	12 22	122 18	11 16	-1 0	N. <sub>2</sub> <sup>1</sup> W.	-0 9	+10 7	+3 50	+0 34	14 31
3.	13 29	121 19	14 3	-1 4	N.W.	-0 3	+12 56	+3 45	+0 39	17 20

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	31 10'	8.58	8.56	- 0.20	8.36		1874.
s.	33 18	8.53					Oct. 26.
N. & s.	50 5	8.56					
n.	30 57	8.66	8.52	- 0.20	8.32		27.
s.	33 17	8.53					
N. & s.	49 56	8.59					
Grns. 2.5	59 49	8.63					
2.0	43 39	8.42					
1.5	31 19	8.45					
1.0	20 19	8.39					
Def. n.	31 22	8.50	8.44	- 0.02	8.42		28.
s.	33 36	8.41					
N. & s.	50 22	8.46					
Grns. 2.5	60 13	8.60					
2.0	44 52	8.24					
1.5	31 27	8.42					
1.0	20 43	8.23					
Def. n.	31 58	8.26	8.16	+ 0.15	8.31		31.
s.	34 16	8.15					
N. & s.	51 2	8.25					
Grns. 2.0	46 5	8.07					
1.5	32 57	8.08					
1.0	20 58	8.14					
Def. n.	31 1	8.60	8.51	- 0.10	8.41		Nov. 1.
s.	33 14	8.52					
N. & s.	50 7	8.50					
Grns. 2.0	43 14	8.48					
1.5	31 5	8.51					
1.0	20 4	8.48					
Def. n.	30 55	8.49	8.58	- 0.08	8.50		2
s.	33 3	8.58					
N. & s.	49 49	8.60					
Grns. 2.0	42 27	8.61					
1.5	31 4	8.51					
1.0	19 56	8.56					
Def. n.	31 18	8.49	8.46	+ 0.02	8.48		3.
s.	33 17	8.50					
N. & s.	50 8	8.49					
Grns. 2.0	43 29	8.44					
1.5	31 23	8.44					
1.0	20 21	8.37					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.T.H.	$\frac{1}{d}$ .	Dip.
1874. Nov. 7.	NORTH. $14^{\circ} 35'$	EAST. $120^{\circ} 58'$	NORTH. $19^{\circ} 10'$	$-1^{\circ} 11'$	...	...	...	...	...	NORTH. $17^{\circ} 59'$
12.	14 58	119 49	16 24	-1 0	N.	+0 4	+15 28	+3 45	+0 44	19 57
13.	16 44	119 20	19 58	-0 57	N.W.	+0 4	+19 15	+3 33	+0 50	23 28
14.	18 8	118 10	21 24	-0 54	N.W. $\frac{1}{2}$ N.	+0 9	+20 39	+3 34	+0 53	25 6
15.	19 50	115 54	24 56	-0 50	N.W. $\frac{1}{2}$ N.	+0 11	+24 17	+3 24	+0 58	28 39
16.	22 10	114 6	29 20	-0 50	N.	+0 23	+28 53	+3 18	+1 4	33 15
26.	22 17	114 10	33 7	-0 47	...	...	...	...	...	32 20
"	"	"	32 29	-0 9	...	...	...	...	...	32 20

# ABSTRACT OF OBSERVATIONS WITH FOX CIRCLES.

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.			
Deflectors. or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.					
Def. N.	30° 54'	...	...	...	8.474	Manila.	1874. Nov. 7.			
S.	33 2									
N. & S.	49 48									
Gr. 2.0	42 54									
1.5	31 2									
1.0	20 13									
Def. N.	30 23	8.75	8.72	- 0.05	8.67	12.				
S.	32 32	8.70								
N. & S.	49 17	8.69								
Gr. 2.0	41 50	8.68								
1.5	30 15	8.72								
1.0	19 32	8.81								
Def. N.	30 35	8.67	8.67	+ 0.05	8.72	13.				
S.	30 43	8.62	8.73	0 0	8.73	Rolling heavily.				
N. & S.	49 10	8.86								
N.	30 7	8.84								
S.	32 9	8.82								
N. & S.	48 33	8.90								
N.	28 58	9.24	8.85	+ 0.04	8.89		Rolling heavily.			
S.	31 2	9.27								
N. & S.	47 16	9.30								
N.	28 56	...				9.193		...	9.193	Hong Kong.
S.	31 5	...								
N. & S.	47 23	...								
Gr. 2.5	52 35	...								
2.0	39 10	...								
1.5	28 41	...	9.193	...	9.193	{ "Mounted" circle C 13 needle A. }				
1.0	18 49	...								
Def. N.	29 54	...					...	...	9.193	
S.	31 54	...					...	...	9.193	
N. & S.	48 6	...					...	...	9.193	
Gr. 2.5	53 12	...	...	...	9.193					
2.0	39 17	...	...	...	9.193	}				
1.5	28 23	...	...	...	9.193					
1.0	18 49	...	...	...	9.193					
		...	...	...	9.193					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1874.	NORTH.	EAST.	NORTH.							NORTH.
Dec. 29.	22° 15'	114° 5'	27° 59'	-0° 47'	N.	+0° 23'	°	°	°	°
			28° 21'	-0° 47'	N.E.	+0° 8'				
			28° 29'	-0° 47'	E.	-0° 13'				
			28° 36'	-0° 47'	S.E.	-0° 24'	+27° 31'	+3° 45'	+1° 2'	32° 18'
			28° 36'	-0° 47'	S.	-0° 26'				
			28° 55'	-0° 47'	S.W.	-0° 24'				
			28° 14'	-0° 47'	W.	-0° 13'				
			28° 6'	-0° 47'	N.W.	+0° 13'				
					N.					
					S.					
1875.										
Jan. 7.	20° 20'	115° 35'	25° 18'	-0° 53'	S.E. <sup>b</sup> E.	-0° 18'	+24° 7'	+3° 58'	+0° 58'	29° 3'
9.	16° 41'	117° 45'	19° 14'	-1° 3'	S.E. <sup>1</sup> / <sub>2</sub> E.	-0° 10'	+18° 1'	+4° 23'	+0° 50'	23° 14'
10.	15° 40'	119° 15'	14° 9'	-1° 10'	S.E.	-0° 5'	+12° 54'	+4° 36'	+0° 41'	18° 11'
15.	13° 35'	121° 0'	10° 58'	-1° 14'	E.	-0° 4'	+9° 40'	+4° 53'	+0° 35'	15° 8'
17.	11° 48'	123° 8'	8° 32'	-1° 18'	E. <sup>b</sup> S.	0° 0'	+7° 14'	+5° 0'	+0° 29'	12° 43'
22.	10° 17'	123° 54'	10° 35'	-1° 17'	..	...	...	...	...	9° 18'

Total Force (British Units) ( $\phi$ ).					REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.	
Def. N.	29 6	9.13	...	+0.02	9.20	1874.
N.	29 40	8.93	...	+0.18		
N.	30 18	8.70	...	+0.47		
N.	30 36	8.58	...	+0.73		
N.	30 49	8.50	...	+0.80		
N.	30 36	8.58	...	+0.68		
N.	30 23	8.66	...	+0.53		
N.	29 27	9.01	...	+0.15		
S.	31 17	9.11	...	+0.02		
S.	32 57	8.49	...	+0.80		
N.	31 0	8.37	8.36	+0.70	9.06	1875.
S.	33 6	8.43				Jan. 7.
N. & S.	50 24	8.27				
N.	31 47	8.10	8.19	+0.64	8.83	9.
S.	34 1	8.10				
N. & S.	50 51	8.14				
Gr. 2.0	45 24	8.23				
1.5	32 32	8.22				
1.0	20 39	8.36				
Def. N.	32 11	7.97	8.03	+0.59	8.62	10.
S.	34 12	8.03				
N. & S.	51 3	8.09				
Gr. 2.0	46 48	8.04	8.10	+0.35	8.45	15.
Def. N.	31 43	8.12				
S.	33 59	8.11				
N. & S.	50 54	8.12				
Gr. 1.5	33 1	8.12	8.05	+0.33	8.38	17.
1.0	21 31	8.04				
Def. N.	32 8	7.98				
S.	34 21	8.09				
N. & S.	51 27	7.97				
Gr. 2.0	47 0	8.01	...	...	8.191	22.
1.5	33 26	8.03				
1.0	21 1	8.22				
Def. N.	31 32	...				
S.	33 46	...	...	...	Zebu.	
N. & S.	50 44	...				
Gr. 2.0	45 18	...				
1.5	32 30	...				
1.0	20 35	...				

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1875. Jan. 25.	NORTH. $9^{\circ} 36'$	EAST. $123^{\circ} 40'$	NORTH. $2^{\circ} 47'$	$-1^{\circ} 22'$	S. $\frac{1}{2}$ W.	$+0^{\circ} 15'$	$+1^{\circ} 40'$	$+5^{\circ} 27'$	$+0^{\circ} 17'$	NORTH. $7^{\circ} 24'$
26.	9 14	124 32	3 36	-1 21	E. $\frac{1}{2}$ S.	0 0	+2 15	+5 24	+0 18	7 57
27.	8 46	123 21	1 43	-1 24	S. W. $\frac{1}{4}$ W.	+0 9	+0 48	+5 29	+0 14	6 11
28.	7 35	121 45	SOUTH. 1 15	-1 27	S. $\frac{3}{4}$ E.	+0 20	-2 22	+5 27	+0 7	3 12
30.	6 52	122 21	1 42 2 1 1 58 1 39 2 35 1 45 2 17 1 17	-1 26 -1 26 -1 26 -1 26 -1 26 -1 26 -1 26 -1 26	N. N.E. E. S.E. S. S.W. W. N.W.	-0 20 -0 13 +0 3 +0 17 +0 21 +0 16 +0 3 -0 13	-3 12	+5 37	+0 4	2 29
					N.					
					S.					
					S.					
					S.					
					S.					
					S.					
					S.					
Feb. 2	6 55	122 4	NORTH. 3 58	-1 27	...	...	...	...	...	2 31

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1875.
Def. N.	32 30	7.85	7.94	+0.30	8.24		Jan. 25.
S.	34 47	7.83					
N. & S.	51 50	7.87					
Grs. 2.0	47 57	7.89					
1.5	33 31	8.01					
1.0	21 7	8.19					
Def. N.	32 2	7.99	8.01	+0.17	8.18		26.
S.	34 14	8.02					
N. & S.	51 21	8.00					
Grs. 2.5	67 8	7.99					
2.0	47 1	8.01					
1.5	33 28	8.02					
1.0	21 31	8.04					
Def. N.	32 21	7.89	7.95	+0.22	8.17		27.
S.	34 21	7.98					
N. & S.	51 23	7.99					
Grs. 2.5	67 45	7.95					
2.0	46 48	8.04					
1.5	34 0	7.91					
1.0	21 54	7.91					
Def. N.	32 7	7.96	8.01	+0.28	8.29		28.
S.	34 12	8.03					
N. & S.	51 29	7.96					
Grs. 2.5	67 51	7.95					
2.0	46 49	8.04					
1.5	33 51	7.94					
1.0	21 7	8.18					
Def. N.	30 20	8.59	...	-0.36	8.25	Swinging in Basilan straits.	30.
N.	30 46	8.43	...	-0.20			
N.	31 31	8.17	...	+0.09			
N.	31 59	8.00	...	+0.25			
N.	31 52	8.04	...	+0.26			
N.	31 57	8.02	...	+0.21			
N.	31 30	8.17	...	+0.08			
N.	30 46	8.43	...	-0.20			
S.	32 35	8.62	...	-0.36			
S.	34 15	8.02	...	+0.26			
N.	31 17	...	...	...	8.217	Samboangan.	Feb. 2.
S.	33 33	...	...	...			
N. & S.	50 26	...	...	...			
Grs. 2.5	64 8	...	...	...			
2.0	45 49	...	...	...			
1.5	32 31	...	...	...			
1.0	20 50	...	...	...			

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1875.	NORTH.	EAST.	NORTH.							NORTH.
Feb. 2.	6° 55'	122° 4'	2° 32'	-0° 1'	...	...	...	...	...	2° 31'
8.	5 47	124 0	SOUTH. 3 45	-1 27	E.N.E.	+0 4	- 5 8	+5 36	+0 1	0 29
9.	5 34	125 29	4 39	-1 28	E. S.	+0 9	- 5 58	+5 35	-0 1	SOUTH. 0 24
11.	4 33	128 46	6 3	-1 30	E.	+0 5	- 7 28	+5 34	-0 3	1 57
13.	4 18	130 45	6 55	-1 31	E.	+0 5	- 8 21	+5 34	-0 5	2 52
14.	3 40	132 38	7 25	-1 31	E.S.E.	+0 17	- 8 39	+5 37	-0 5	3 7
16.	2 49	134 4	8 47	-1 32	N.E.	-0 21	-10 40	+5 35	-0 8	5 13
17.	2 39	134 59	10 38	-1 33	S.E. S.	+0 31	-11 40	+5 32	-0 11	6 19

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. n.	32° 4'	...	...	...	8.247	Samboangan.	1875.
n.	30 48	8.41	8.39	- 0.36	8.03	Mounted circle C. 13 needle A.	Feb. 2.
s.	33 2	8.45					
N. & s.	49 48	8.42					
Grns. 2.0	44 53	8.36				Mounted circle C. 13 needle B.	8.
1.5	31 41	8.44					
1.0	20 48	8.28					
Def. n.	31 53	8.04	8.15	+ 0.10	8.25		9.
s.	33 44	8.19					
N. & s.	50 48	8.14					
Grns. 2.0	45 41	8.25					
1.5	33 7	8.11					
1.0	21 31	7.99					
Def. n.	32 14	7.92	8.03	+ 0.10	8.13		11.
s.	33 51	8.13					
N. & s.	50 50	8.13					
Grns. 2.0	46 28	8.14					
1.5	33 18	8.07					
1.0	22 3	7.81					
Def. n.	31 40	8.11	8.18	+ 0.10	8.28		13.
s.	33 42	8.19					
N. & s.	50 28	8.22					
Grns. 2.0	46 4	8.19					
1.5	32 50	8.18					
1.0	20 54	8.22					
Def. n.	31 53	8.03	8.11	+ 0.18	8.29		14.
s.	33 54	8.11					
N. & s.	50 29	8.21					
Grns. 2.0	46 17	8.16					
1.5	33 12	8.10					
1.0	21 20	8.06					
Def. n.	30 44	8.43	8.46	- 0.20	8.26		16.
s.	32 54	8.45					
N. & s.	49 23	8.54					
Grns. 2.0	43 51	8.52					
1.5	31 59	8.37					
1.0	20 17	8.46					
Def. n.	31 47	8.06	8.13	+ 0.26	8.39		17.
s.	33 46	8.16					
N. & s.	50 42	8.15					
Grns. 2.0	46 20	8.16					
1.5	33 42	7.99					
1.0	20 50	8.24					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1875. Feb. 18.	NORTH. $1^{\circ} 58'$	EAST. $135^{\circ} 43'$	SOUTH. $11^{\circ} 49'$	$-1^{\circ} 35'$	E.	$+0^{\circ} 8'$	$-13^{\circ} 16'$	$+5^{\circ} 28'$	$-0^{\circ} 13'$	SOUTH. $8^{\circ} 1'$
22.	SOUTH. $0^{\circ} 44'$	139 4	16 36	-1 37	E.S.E.	+0 26	-17 47	+5 15	-0 23	12 55
23.	2 14	140 35	20 12	-1 44	S. <sup>b</sup> E. <sub>1</sub> <sup>2</sup> E.	+0 51	-21 5	+5 6	-0 27	16 26
25.	2 14	141 21	18 35	-1 42	E.N.E.	-0 12	-20 29	+5 8	-0 27	15 48
26.	2 2	142 20	18 9	-1 42	E.N.E.	-0 12	-20 3	+5 10	-0 27	15 20
27.	1 53	143 19	18 9	-1 42	E. <sup>b</sup> N.	0 0	-19 51	+5 11	-0 27	15 7
28.	2 26	143 58	19 22	-1 43	E.N.E.	-0 12	-21 17	+5 4	-0 29	16 42
Mar. 2.	1 15	145 37	17 34	-1 38	N.E. <sup>b</sup> E.	-0 22	-19 34	+5 11	-0 26	14 19

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	31 40	8.10	8.12	+ 0.10	8.22	1875.  Feb. 18.	
S.	33 50	8.13					
N. & S.	50 58	8.08					
Grs. 2.0	46 54	8.08					
1.5	32 40	8.21					
1.0	21 5	8.15					
Def. N.	30 54	8.37	8.38	+ 0.18	8.56		22.
S.	33 6	8.39					
N. & S.	49 33	8.48					
Grs. 2.0	44 15	8.46					
1.5	32 10	8.33					
1.0	20 44	8.28					
Def. N.	30 27	8.54	8.55	+ 0.28	8.83	23.	
S.	32 38	8.56					
N. & S.	49 20	8.54					
Def. N.	29 57	8.72	8.76	- 0.04	8.72	25.	
S.	32 8	8.73					
N. & S.	48 42	8.73					
Grs. 2.0	42 0	8.82					
1.5	29 45	8.93					
1.0	19 39	8.72					
Def. N.	30 8	8.64	8.67	- 0.04	8.63		26.
S.	32 10	8.72					
N. & S.	48 43	8.72					
Grs. 2.0	42 16	8.77					
1.5	31 0	8.61					
1.0	20 2	8.56					
Def. N.	30 22	8.56	8.62	0 00	8.62	27.	
S.	32 23	8.65					
N. & S.	49 10	8.58					
Grs. 2.0	43 19	8.60					
1.5	31 1	8.60					
1.0	19 35	8.74					
Def. N.	30 13	8.61	8.64	- 0.04	8.60		28.
S.	32 21	8.65					
N. & S.	48 51	8.67					
Def. N.	30 9	8.63	8.59	- 0.12	8.47		March 2.
S.	32 34	8.57					
N. & S.	49 0	8.63					
Grs. 2.0	43 7	8.63					
1.5	31 2	8.60					
1.0	20 17	8.46					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1875. Mar. 7.	SOUTH. 1° 55'	EAST. 146° 40'	SOUTH. 13° 57'	-1° 44'	...	...	...	...	...	SOUTH. 15° 41'
12.	NORTH. 0 21	148 7	13 20	-1 32	N.E.	-0 27	-15 19	+5 24	-0 18	10 13
13.	0 42	148 49	13 12	-1 32	E. <sup>b</sup> N.	-0 1	-14 45	+5 25	-0 17	9 37
14.	0 48	147 51	12 30	-1 31	W.N.W.	-0 5	-14 6	+5 27	-0 16	8 55
15.	1 30	147 10	10 30	-1 27	N.N.W.	-0 31	-12 28	+5 34	-0 11	7 5
16.	2 18	146 16	9 3	-1 26	N.	-0 32	-11 1	+5 37	-0 10	5 34
17.	3 18	145 35	7 20	-1 23	N.	-0 29	-9 12	+5 39	-0 15	3 48

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30 50	...	...	...	8.391	Admiralty island.	1875. Mar. 7.
S.	33 3						
N. & S.	49 46						
Grs. 2.5	63 56						
2.0	44 33						
1.0	20 27						
Def. N.	30 23	8.53	8.53	-0.20	8.33		12.
S.	32 27	8.59					
N. & S.	49 15	8.53					
Grs. 2.0	44 43	8.40					
1.5	31 14	8.73					
1.0	20 28	8.42					
Def. N.	31 16	8.21	8.22	0 0	8.22		13.
S.	33 22	8.26					
N. & S.	50 12	8.23					
Grs. 2.0	45 14	8.32					
1.5	32 57	8.33					
1.0	21 39	7.98					
Def. N.	31 8	8.25	8.26	-0.04	8.22		14.
S.	33 2	8.38					
N. & S.	49 53	8.32					
Grs. 2.0	45 50	8.24					
1.5	32 19	8.47					
Def. N.	30 20	8.54	8.53	-0.26	8.27		15.
S.	32 21	8.62					
N. & S.	49 18	8.49					
Grs. 2.5	61 45	8.46					
2.0	44 32	8.42					
1.5	31 26	8.68					
1.0	20 13	8.52					
Def. N.	30 30	8.48	8.52	-0.36	8.16		16.
S.	32 26	8.59					
N. & S.	49 14	8.51					
Grs. 2.0	43 58	8.51					
1.5	31 17	8.72					
1.0	20 42	8.33					
Def. N.	30 27	8.48	8.55	-0.36	8.19		17.
S.	32 31	8.55					
N. & S.	49 13	8.51					
Grs. 2.5	61 52	8.45					
2.0	44 3	8.50					
1.5	31 31	8.66					
1.0	19 48	8.69					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{\theta}$ .	Dip.
1875. Mar. 18.	NORTH. 4° 21'	EAST. 145° 18'	SOUTH. 5° 34'	-1° 20'	N. <sup>b</sup> E.	-0° 23'	- 7° 17'	+5° 41'	-0° 3'	SOUTH. 1° 39'
20.	6 26	145 5	1 44	-1 14	N.	-0 20	- 3 18	+5 47	+0 4	NORTH. 2 33
21.	7 52	144 20	NORTH. 0 43	-1 11	N. $\frac{1}{2}$ W.	-0 16	- 0 44	+5 49	+0 9	5 14
22.	9 36	143 56	3 58	-1 8	N. <sup>b</sup> W. $\frac{3}{4}$ W.	-0 13	+ 2 37	+5 54	+0 15	8 46
23.	11 27	143 15	7 15	-1 2	N. $\frac{1}{2}$ E.	-0 8	+ 6 5	+5 52	+0 21	12 18
24.	13 2	142 45	10 15	-0 56	N.	-0 5	+ 9 14	+5 48	+0 27	15 29
"	13 34	142 41	11 41	-0 54	N. $\frac{1}{2}$ W.	-0 3	+10 44	+5 44	+0 29	16 57
25.	14 46	142 12	13 56	-0 52	N. <sup>b</sup> W.	0 0	+13 4	+5 37	+0 32	19 13

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30 24	8.50	8.46	- 0.31	8.15		1875.
S.	32 45	8.47					
N. & S.	49 28	8.43					
Grs. 2.0	44 58	8.36					Mar. 18.
1.5	31 42	8.62					
1.0	20 30	8.41					
Def. N.	30 42	8.38	8.27	- 0.36	7.91		20.
S.	32 52	8.43					
N. & S.	49 45	8.33					
Grs. 2.5	65 29	8.19					
2.0	46 3	8.20					
1.5	32 20	8.47					
1.0	20 48	8.29					
Def. N.	30 57	8.29	8.23	- 0.32	7.91		21.
S.	33 10	8.31					
N. & S.	50 10	8.20					
Grs. 2.5	66 36	8.12					
2.0	46 50	8.10					
1.5	32 28	8.44					
1.0	21 11	8.15					
Def. N.	31 27	8.12	8.11	- 0.28	7.83		22.
S.	33 30	8.19					
N. & S.	50 45	8.03					
Grs. 2.0	47 8	8.06					
1.5	32 52	8.34					
1.0	21 51	7.91					
Def. N.	31 6	8.24	8.20	- 0.30	7.90		23.
S.	33 33	8.17					
N. & S.	53 13	8.18					
N.	30 56	8.28	8.24	- 0.23	8.01	Lurching.	24.
S.	33 14	8.28					
N. & S.	50 0	8.24					
Grs. 2.0	46 13	8.18					
1.5	32 44	8.37					
1.0	21 26	8.06					
Def. N.	31 21	8.14	8.18	- 0.19	7.99		
S.	33 18	8.26					
N. & S.	50 20	8.14					
N.	31 10	8.20	8.22	- 0.13	8.09		25.
S.	33 23	8.22					
N. & S.	50 30	8.08					
Grs. 2.0	46 1	8.21					
1.5	32 37	8.40					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1875.	NORTH.	EAST.	NORTH.							NORTH.
Mar. 26.	16° 18'	141° 45'	16° 28'	-0° 48'	N. $\frac{3}{4}$ W.	+0° 3'	+15° 43'	+5° 33'	+0° 35'	21° 51'
„	16 39	141 42	17 11	-0 46	N.	+0 4	+16 29	+5 33	+0 36	22 38
27.	17 31	141 21	18 21	-0 44	N.	+0 6	+17 43	+5 28	+0 38	23 49
28.	18 24	141 11	19 36	-0 43	N. <sup>b</sup> E.	+0 7	+19 0	+5 28	+0 39	25 8
29.	19 27	141 13	21 36	-0 40	N.	+0 10	+21 6	+5 20	+0 41	27 7
30.	20 11	141 0	22 45	-0 39	N. <sup>b</sup> W.	+0 11	+22 17	+5 15	+0 43	28 15
31.	21 17	140 40	24 28	-0 38	N. <sup>b</sup> W.	+0 13	+24 3	+5 6	+0 44	29 53
April 2.	22 38	139 25	26 47	-0 35	N.N.W.	+0 14	+26 26	+4 58	+0 46	32 10

Defectors or Grains.	Angle.	Total Force (British Units) ( $\phi$ ).				REMARKS.	Date.
		$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30 52	8 30	8 35	- 0 11	8 24		1875.
S.	33 13	8 28					
N. & S.	50 7	8 20					
Grs. 2 0	45 44	8 25					Mar. 26.
1 5	31 58	8 55					
1 0	20 8	8 55					
...	...	...	...	...	...		"
Def. N.	30 47	8 33	8 35	- 0 12	8 23		27.
S.	33 2	8 35					
N. & S.	49 40	8 32					
Grs. 2 5	61 24	8 41					
2 0	44 52	8 37					
1 5	33 1	8 31					
Def. N.	30 42	8 36	8 37	- 0 08	8 29		28.
S.	32 58	8 37					
N. & S.	49 32	8 36					
Grs. 2 0	41 35	8 41					
1 5	32 44	8 37					
Def. N.	30 55	8 27	8 36	- 0 08	8 28		29.
S.	33 10	8 29					
N. & S.	49 39	8 31					
Grs. 2 5	62 51	8 38					
2 0	44 56	8 36					
1 5	32 21	8 46					
1 0	20 23	8 45					
Def. N.	30 21	8 48	8 41	- 0 02	8 39		30.
S.	32 58	8 36					
N. & S.	49 22	8 40					
Grs. 2 5	62 36	8 39					
2 0	44 22	8 45					
1 5	32 0	8 55					
1 0	20 51	8 27					
Def. N.	30 25	8 45	8 47	- 0 01	8 46		31.
S.	32 42	8 45					
N. & S.	49 21	8 40					
Grs. 2 5	61 54	8 45					
2 0	43 50	8 53					
1 5	32 14	8 49					
1 0	20 18	8 49					
Def. N.	30 10	8 53	8 46	+ 0 09	8 55		April 2.
S.	32 47	8 41					
N. & S.	49 15	8 41					
Grs. 2 0	44 22	8 45					
1 5	32 15	8 49					
1 0	20 15	8 51					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{\theta}$ .	Dip.
1875. April 3.	NORTH. 24° 43'	EAST. 138° 34'	NORTH. 29° 54'	- 0° 30'	N.	+ 0° 21'	+ 29° 45'	+ 4° 41'	+ 0° 49'	NORTH. 35° 15'
4.	25 30	137 57	31 10	- 0 29	N.	+ 0 23	+ 31 4	- 4 36	+ 0 50	36 30
6.	27 5	137 59	33 25	- 0 26	N.	+ 0 25	+ 33 24	+ 4 22	+ 0 51	38 37
7.	28 29	137 31	36 25	- 0 22	N.W., $\frac{1}{2}$ W.	- 0 1	+ 36 2	+ 4 9	+ 0 51	41 2
8.	29 46	137 0	37 29	- 0 20	N., $\frac{1}{2}$ E.	+ 0 27	+ 37 36	+ 4 2	+ 0 51	42 29
9.	31 13	137 10	39 32	- 0 17	N.N.E.	+ 0 28	+ 39 43	+ 3 48	+ 0 52	44 23
10.	33 8	138 26	42 2	- 0 12	N.N.E.	+ 0 30	+ 42 20	+ 3 36	+ 0 52	46 48
11.	34 33	139 10	43 37	- 0 10	N.N.E.	+ 0 32	+ 43 59	+ 3 27	+ 0 52	48 18

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1875.
Def. N.	29 37	8.77	8.70	+0.01	8.71		April 3.
S.	32 3	8.66					
N. & S.	48 24	8.67					
Gr. 2.5	60 2	8.60					
2.0	42 26	8.75					
1.5	30 56	8.81					
1.0	19 53	8.66					
Def. N.	29 35	8.73	8.80	+0.03	8.83		4.
S.	31 46	8.77					
N. & S.	48 11	8.73					
Gr. 2.5	55 45	9.01					
2.0	41 46	8.87					
1.5	30 28	8.93					
1.0	20 2	8.59					
Def. N.	29 17	8.84	8.90	+0.05	8.95		6.
S.	31 37	8.82					
N. & S.	47 44	8.86					
Gr. 2.5	56 29	8.94					
2.0	40 31	9.09					
1.5	30 23	8.95					
1.0	19 35	8.78					
Def. N.	29 31	8.74	8.70	+0.39	9.09		7.
S.	31 56	8.70					
N. & S.	48 19	8.67					
N.	28 31	9.11	9.11	+0.14	9.25		8.
S.	30 49	9.14					
N. & S.	47 0	9.07					
N.	28 38	9.07	9.22	+0.17	9.39		9.
S.	30 15	9.35					
N. & S.	46 24	9.27					
Gr. 2.5	53 35	9.26					
2.0	40 44	9.05					
1.5	28 18	9.55					
1.0	19 4	9.01					
Def. N.	28 4	9.29	9.25	+0.21	9.46		10
S.	30 40	9.19					
N. & S.	46 26	9.26					
N.	28 4	9.28	9.44	+0.23	9.67		11.
S.	30 9	9.38					
N. & S.	46 14	9.32					
Gr. 2.5	51 8	9.57					
2.0	38 31	9.49					
1.5	28 6	9.61					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A \Pi}$ .	$\frac{1}{d}$ .	Dip.
1875. April 13.	NORTH. 35° 25'	EAST. 139° 42'	NORTH. 44° 7'	- 0° 9'	N. N.E. E. S.E. S. S.W. W. N.W. N. S.	+ 0° 41' + 0 23 - 0 21 - 0 45 - 0 48 - 0 44 - 0 22 + 0 11	° 3	° 21	° 34	NORTH. ° 58
20.	35 26	139 39	48 58	- 0 9	...	...	...	...	...	48 49
May 10.	"	"	48 52	- 0 3	...	...	...	...	...	48 49
13.	34 30	138 16	44 33	- 0 9	w. $\frac{1}{2}$ N.	- 0 18	+ 44 6	+ 3 31	+ 0 34	48 11
18.	34 41	135 12	48 44	- 0 5	...	...	...	...	...	48 39
"	"	"	48 32	+ 0 7	...	...	...	...	...	48 39
28.	34 18	133 20	44 49	- 0 9	E. $\frac{1}{2}$ S.	- 0 29	+ 44 11	+ 3 30	+ 0 17	48 15

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	27 48	9.35	...	+0.19	9.70	Swinging in Yedo bay.	1875.
N.	28 0	9.27	...	+0.33			April 13.
N.	28 53	8.93	...	+0.68			
N.	29 21	8.76	...	+0.99			
N.	29 10	8.83	...	+1.07			
N.	29 5	8.86	...	+0.95			
N.	28 42	9.00	...	+0.70			
N.	28 3	9.25	...	+0.39			
S.	30 6	9.38	...	+0.19			
S.	31 33	8.82	...	+1.07			
N.	26 56	...	...	...	9.699	Yokohama.	20.
S.	29 24	...	...	...			
N. & S.	44 58	...	...	...			
Grs. 2.5	49 26	...	...	...			
2.0	37 40	...	...	...			
1.5	27 50	...	...	...			
1.0	17 45	...	...	...			
Def. N.	27 33	...	...	...	9.699	" Mounted circle C. 13 needle A.	May 10.
S.	29 57	...	...	...			
N. & S.	45 30	...	...	...			
Grs. 2.5	49 25	...	...	...			
2.0	38 17	...	...	...			
1.5	28 0	...	...	...			
1.0	17 36	...	...	...			
Def. N.	28 33	8.99	9.05	+0.66	9.71	Mounted circle C. 13 needle B.	13.
S.	30 45	9.07					
N. & S.	46 37	9.08					
N.	26 31	...	...	...	9.910	Kobé.	18.
S.	28 58	...	...	...			
N. & S.	44 29	...	...	...			
Grs. 2.5	47 47	...	...	...			
2.0	36 36	...	...	...			
1.5	27 6	...	...	...			
1.0	17 39	...	...	...			
...	...	...	...	...	...	" Mounted circle C. 13 needle A.	"
Def. N.	28 1	9.14	9.15	+0.77	9.92	Mounted circle C. 13 needle B.	28.
S.	30 27	9.16					
N. & S.	46 18	9.16					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d'}$ .	Dip.
1875. June 3.	NORTH. 32° 42'	EAST. 136° 4'	NORTH. 40° 52'	-0° 9'	N.E. $\frac{1}{2}$ N.	+1° 13'	+41° 56'	+3° 45'	+0° 17'	NORTH. 45° 58'
6.	35 25	139 42	43 29 45 17 46 20 45 15	-0 9 -0 9 -0 9 -0 9	N. E. S. W. N. S.	+1 28 -0 23 -1 35 -0 27	+44 42	+3 32	+0 17	48 31
17.	34 37	140 46	43 14	-0 12	E.	-0 25	+42 37	+3 49	+0 17	46 43
18.	34 43	144 6	42 43	-0 12	E.	-0 25	+42 6	+3 57	+0 17	46 20
19.	35 19	147 22	42 52	-0 12	E. $\frac{1}{4}$ N.	-0 19	+42 21	+3 56	+0 17	46 34
20.	35 34	150 41	42 58	-0 12	E. $\frac{1}{4}$ N.	-0 19	+42 27	+3 56	+0 17	46 40
22.	35 26	156 21	42 52	-0 12	E.	-0 25	+42 15	+4 3	+0 17	46 35
24.	35 30	160 48	42 59	-0 12	E.	-0 25	+42 22	+4 3	+0 17	46 42

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.	
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.			
Def. N.	27 39	9.25	9.27	+ 0.36	9.63	Swinging in Yedo bay.	1875.	
S.	29 52	9.36						
N. & S.	46 8	9.20						
Grs. 2.5	53 17	9.22						
2.0	39 25	9.31						
Def. N.	27 32	9.45	...	+ 0.34	9.79		6.	
S.	28 31	9.07	...	+ 0.73				
N.	29 10	8.83	...	+ 0.98				
N.	28 38	9.03	...	+ 0.74				
S.	29 48	9.50	...	+ 0.34				
S.	31 37	8.79	...	+ 0.98	9.57		17.	
N.	28 43	8.82	8.85	+ 0.72				
S.	31 7	8.87						
N. & S.	47 7	8.87						
N.	29 1	8.70	8.66	+ 0.72	9.38		18.	
S.	31 39	8.65						
N. & S.	47 50	8.64						
N.	29 20	8.59	8.65	+ 0.70	9.35		19.	
S.	31 38	8.66						
N. & S.	47 41	8.69						
N.	29 23	8.56	8.60	+ 0.70	9.30	20.		
S.	31 52	8.56						
N. & S.	47 57	8.60						
Grs. 2.0	43 19	8.59						
1.5	30 46	8.70						
Def. N.	30 1	8.33	8.37	+ 0.72	9.09	22.		
S.	32 45	8.24						
N. & S.	48 54	8.32						
Grs. 2.5	60 54	8.46						
2.0	44 15	8.45						
1.5	31 42	8.45	8.31	+ 0.72	9.03	24.		
1.0	20 42	8.33						
Def. N.	30 20	8.21						
S.	32 37	8.28						
N. & S.	49 12	8.23						
Grs. 2.5	62 33	8.33						
2.0	44 33	8.41						
1.5	32 4	8.36						
1.0	20 35	8.38						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{d.}$ .	Dip.
1875. June 25.	NORTH. 35° 21'	EAST. 164° 18'	NORTH. 43° 22'	- 0° 12'	E.	- 0° 25'	+ 42° 45'	+ 4° 2'	+ 0° 17'	NORTH. 47° 4'
27.	35 23	168 15	43 21	- 0 12	E. $\frac{1}{4}$ N.	- 0 19	+ 43 0	+ 4 2	+ 0 17	47 19
28.	35 22	169 57	44 8	- 0 11	E. $\frac{1}{2}$ N.	- 0 13	+ 43 44	+ 3 56	+ 0 17	47 57
29.	35 41	171 37	43 16	- 0 12	N.E.	+ 0 56	+ 45 0	+ 3 46	+ 0 17	49 3
30.	36 22	174 11	45 41	- 0 9	E. $\frac{1}{2}$ N.	- 0 12	+ 45 20	+ 3 44	+ 0 17	49 21
July 1.	36 10	176 0	46 28	- 0 8	E.	- 0 22	+ 45 58	+ 3 39	+ 0 17	49 54
3.	35 51	179 43	47 15	- 0 8	E. $\frac{1}{4}$ S.	- 0 26	+ 46 41	+ 3 34	+ 0 17	50 32

Total Force (British Units) ( $\phi$ )						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30 35	8.12	8.21	+0.72	8.93		1875.
S.	33 12	8.08					
N. & S.	49 20	8.19					
Grs. 2.5	62 36	8.33					June 25.
2.0	45 51	8.21					
1.5	33 0	8.14	8.24	+0.70	8.94		
1.0	20 27	8.43					
Def. N.	30 16	8.22					
S.	32 49	8.21					
N. & S.	49 0	8.28					27.
Grs. 2.0	44 48	8.36	8.29	+0.68	8.97		
1.5	32 21	8.29					
1.0	21 15	8.11					
Def. N.	30 16	8.23					
S.	32 40	8.26					28.
N. & S.	49 7	8.25	8.43	+0.45	8.88		
Grs. 2.0	45 9	8.31					
1.5	31 51	8.41					
Def. N.	29 40	8.44					
S.	32 4	8.46					
N. & S.	48 24	8.45	8.39	+0.69	9.08		29.
Grs. 2.5	60 7	8.56					
2.0	44 24	8.42					
1.5	32 12	8.32					
1.0	20 28	8.42					
Def. N.	30 0	8.32	8.31	+0.74	9.05		
S.	32 20	8.36					
N. & S.	48 33	8.41					
Grs. 2.5	60 37	8.49					30.
2.0	44 51	8.35					
1.5	31 26	8.49	8.31	+0.75	8.96		
1.0	20 41	8.33					
Def. N.	30 9	8.28					
S.	32 35	8.28					
N. & S.	48 45	8.35					
Grs. 2.5	61 28	8.42	8.21	+0.75	8.96		July 1.
2.0	45 8	8.31					
1.5	32 33	8.23					
Def. N.	30 20	8.29					
S.	32 38	8.26					
N. & S.	49 3	8.26	8.21	+0.75	8.96		
Grs. 2.0	46 16	8.14					3.
1.5	32 34	8.23					
1.0	21 2	8.20					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1875, July 4.	NORTH. 36° 38'	WEST. 179° 55'	NORTH. 46° 1'	- 0° 8'	N. by E.	+ 1° 22'	+ 47° 14'	+ 3° 30'	+ 0° 17'	NORTH. 51° 1'
„	36 58	179 0	47 58	- 0 7	E. N. E.	+ 0 21	+ 48 12	+ 3 25	+ 0 17	51 54
6.	38 11	175 43	49 5	- 0 5	N. E. $\frac{1}{2}$ E.	+ 0 50	+ 49 50	+ 3 12	+ 0 16	53 18
7.	37 59	171 43	50 15	- 0 4	E. by N. $\frac{1}{4}$ N.	+ 0 13	+ 50 24	+ 3 8	+ 0 16	53 48
8.	37 48	169 14	51 8	- 0 3	E. by N. $\frac{1}{2}$ N.	+ 0 13	+ 51 18	+ 3 1	+ 0 16	54 35
9.	37 49	166 25	51 36	- 0 2	E. by N. $\frac{1}{4}$ N.	+ 0 13	+ 51 47	+ 2 57	+ 0 16	55 0
10.	37 35	163 46	51 33	- 0 2	E. by N. $\frac{1}{4}$ N.	+ 0 13	+ 51 44	+ 2 57	+ 0 16	54 57

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	28 53	8.70	8.75	+ 0.36	9.11		1875.
S.	31 16	8.76					
N. & S.	47 20	8.77					
Grs. 2.5	56 15	8.90					July 4.
2.0	41 52	8.82					
1.5	31 13	8.54	8.63	+ 0.61	9.21		
1.0	19 33	8.78					
Def. N.	29 21	8.54					
S.	31 46	8.56					
N. & S.	47 56	8.59					"
Grs. 2.5	58 41	8.66	8.83	+ 0.49	9.32		
2.0	42 54	8.65					
1.5	30 50	8.63					
1.0	19 36	8.77					
Def. N.	28 53	8.69	8.83	+ 0.49	9.32		6.
S.	31 5	8.82					
N. & S.	47 8	8.82					
Grs. 2.5	55 29	8.98					
2.0	42 13	8.75					
1.5	30 58	8.60	8.73	+ 0.67	9.40		7.
1.0	18 42	9.18					
Def. N.	28 49	8.72					
S.	31 19	8.73					
N. & S.	47 24	8.74					
N.	28 36	8.79	8.81	+ 0.67	9.48		8.
S.	30 57	8.87					
N. & S.	47 2	8.85					
Grs. 2.5	56 31	8.87					
2.0	41 19	8.91					
1.5	31 4	8.57	8.97	+ 0.68	9.65		9.
1.0	19 32	8.80					
Def. N.	28 31	8.82					
S.	30 43	8.95					
N. & S.	46 50	8.91					
Grs. 2.0	40 15	9.11	9.04	+ 0.68	9.72		10.
1.5	29 29	8.98					
1.0	19 0	9.03					
Def. N.	28 3	8.99					
S.	30 30	9.04					
N. & S.	46 38	8.98					
Grs. 2.5	54 5	9.13	9.04	+ 0.68	9.72		
2.0	40 39	9.03					
1.5	29 13	9.05					
1.0	18 52	9.09					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{\theta}$ .	Dip.
1875. July 11.	NORTH. 37° 43'	WEST. 161° 47'	NORTH. 51° 46'	- 0° 2'	E. $\frac{1}{2}$ N. $\frac{3}{4}$ N.	+ 0° 20'	+ 52° 4'	+ 2° 55'	+ 0° 16'	NORTH. 55° 15'
12.	37 52	160 15	52 37	- 0 2	E. $\frac{1}{2}$ N. $\frac{3}{4}$ N.	+ 0 21	+ 52 56	+ 2 47	+ 0 16	55 59
13.	37 54	158 32	52 49	- 0 1	E. $\frac{1}{2}$ N. $\frac{3}{4}$ N.	+ 0 21	+ 53 9	+ 2 46	+ 0 16	56 11
14.	38 8	156 34	54 57	0 0	S. E. $\frac{1}{2}$ E.	- 1 12	+ 53 45	+ 2 41	+ 0 16	56 42
15.	37 27	155 27	53 0	0 0	N. E. $\frac{1}{2}$ E.	+ 0 43	+ 52 43	+ 2 48	+ 0 16	55 47
16.	37 8	154 54	54 39	0 0	S. S. E.	- 1 31	+ 53 8	+ 2 41	+ 0 16	56 8
"	36 14	154 45	54 5	0 0	S. S. E.	- 1 31	+ 52 34	+ 2 48	+ 0 16	55 38
17.	35 12	154 43	52 37	- 0 1	S. S. E.	- 1 31	+ 51 5	+ 2 57	+ 0 16	54 18

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	27 47	9.08	9.13	+ 0.64	9.77		1875.
S.	30 11	9.14					July 11.
N. & S.	46 0	9.18					
Grs. 2.0	39 51	9.18					
1.5	29 8	9.07					
Def. N.	27 35	9.15	9.21	+ 0.64	9.85		12.
S.	30 0	9.21					
N. & S.	45 40	9.28					
N.	27 23	9.23	9.29	+ 0.64	9.93		13.
S.	29 48	9.29					
N. & S.	45 36	9.31					
Grs. 2.5	52 26	9.34					
2.0	39 2	9.33					
1.5	28 52	9.15					
1.0	18 19	9.37					
Def. N.	27 42	9.10	9.13	+ 0.97	10.10		14.
S.	30 17	9.11					
N. & S.	45 58	9.18					
Grs. 2.0	40 4	9.14					
Def. N.	27 6	9.32	9.42	+ 0.55	9.97		15.
S.	29 41	9.33					
N. & S.	45 20	9.40					
Grs. 2.5	51 8	9.50					
2.0	39 42	9.20					
1.5	27 13	9.65					
1.0	17 54	9.56					
Def. N.	28 4	8.97	9.12	+ 1.07	10.19		16.
S.	30 20	9.08					
N. & S.	46 8	9.13					
Grs. 2.0	39 23	9.26					
1.5	28 51	9.14					
1.0	18 41	9.17					
Def. N.	28 15	8.90	8.95	+ 1.07	10.02		"
S.	30 39	8.96					
N. & S.	46 34	8.99					
Def. N.	28 31	8.79	8.85	+ 1.04	9.89		17.
S.	31 1	8.82					
N. & S.	47 2	8.83					
Grs. 2.5	55 31	8.97					
2.0	41 52	8.80					
1.5	30 29	8.70					
1.0	18 54	9.07					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{\bar{\alpha}}$ .	Dip.
1875. July 18.	NORTH. 34° 22'	WEST. 154° 53'	NORTH. 51° 26'	- 0° 2'	S.S.E.	- 1° 31'	+ 49° 53'	+ 3° 2'	+ 0° 16'	NORTH. 53° 11'
19.	32 45	154 48	49 53	- 0 4	S.S.E.	- 1 32	+ 48 17	+ 3 12	+ 0 17	51 46
20.	31 1	154 28	47 58	- 0 7	S.	- 1 35	+ 46 16	+ 3 27	+ 0 17	50 0
21.	30 20	154 55	47 15	- 0 8	S.S.E.	- 1 32	+ 45 35	+ 3 32	+ 0 17	49 24
22.	29 11	154 43	45 53	- 0 9	S. <sup>b</sup> E.	- 1 33	+ 44 11	+ 3 39	+ 0 17	48 7
23.	27 38	154 55	44 7	- 0 10	S. <sup>b</sup> E.	- 1 33	+ 42 24	+ 3 51	+ 0 17	46 32

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Dollators or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. x.	28 58	8.63	8.71	+ 1.03	9.74	1875.	
s.	31 12	8.76					
N. & s.	17 19	8.75					
Grs. 2.5	57 32	8.77					
2.0	42 34	8.68					
1.5	30 29	8.69					
1.0	19 48	8.67				July 18.	
Def. x.	29 6	8.57	8.60	+ 1.01	9.61	19.	
s.	41 43	8.54					
N. & s.	47 44	8.62					
Grs. 2.5	59 11	8.61					
2.0	42 58	8.61					
1.5	30 33	8.67					
1.0	20 2	8.58					
Def. x.	29 40	8.38	8.41	+ 1.03	9.44	20.	
s.	32 5	8.40					
N. & s.	48 12	8.48					
Grs. 2.5	60 6	8.54					
2.0	44 27	8.38					
1.5	32 12	8.26					
1.0	20 20	8.46					
Def. x.	29 54	8.29	8.39	+ 0.98	9.37	21.	
s.	32 19	8.33					
N. & s.	47 44	8.61					
Grs. 2.5	60 56	8.47					
2.0	44 30	8.38					
1.5	32 8	8.28					
1.0	20 36	8.36					
Def. x.	30 14	8.18	8.29	+ 0.97	9.26	22.	
s.	32 30	8.27					
N. & s.	48 41	8.33					
Grs. 2.5	61 24	8.44					
2.0	44 8	8.43					
1.5	32 59	8.08					
1.0	20 48	8.28					
Def. x.	30 33	8.06	8.16	+ 0.95	9.11	23.	
s.	32 53	8.15					
N. & s.	49 18	8.15					
Grs. 2.5	64 36	8.20					
2.0	45 54	8.17					
1.5	32 30	8.20					
1.0	21 5	8.17					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{\delta}$ .	Dip.
1875. July 24.	NORTH. 26° 28'	WEST. 155° 10'	NORTH. 42° 38'	- 0° 12'	s. $\frac{1}{2}$ E.	- 1° 34'	+ 40° 52'	+ 4° 0'	+ 0° 17'	NORTH. 45° 9'
25.	24 54	155 37	40 38	- 0 15	s. $\frac{1}{2}$ E.	- 1 33	+ 38 50	+ 4 13	+ 0 17	43 20
„	24 30	155 41	39 27	- 0 17	s.	- 1 34	+ 37 36	+ 4 22	+ 0 17	42 15
26.	22 51	156 14	37 47	- 0 19	s. $\frac{1}{2}$ W. $\frac{1}{2}$ W.	- 1 31	+ 35 57	+ 4 31	+ 0 17	40 45
Aug. 3.	21 18	157 51	40 18	- 0 21	...	...	...	...	...	39 57
5.	21 18	157 51	39 51	+ 0 6	...	...	...	...	...	39 57

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	30 46	7.99	7.99	+ 0.95	8.94		1875.
S.	33 26	7.94					July 24.
N. & S.	49 41	8.04					
Gr. 2.0	45 55	8.17					
1.5	33 11	8.03					
1.0	22 10	7.79					
Def. N.	31 31	7.73	7.88	+ 0.90	8.78		25.
S.	33 42	7.85					
N. & S.	50 13	7.88					
Gr. 2.0	48 11	7.88					
1.5	33 45	7.91					
1.0	21 30	8.01					
Def. N.	31 18	7.80	7.85	+ 0.90	8.75		"
S.	33 40	7.86					
N. & S.	50 9	7.90					
N.	31 34	7.71	7.75	+ 0.86	8.61		26.
S.	34 1	7.73					
N. & S.	50 32	7.79					
Gr. 2.0	50 6	7.65					
1.5	34 1	7.86					
1.0	22 7	7.79					
Def. N.	29 11	...	...	...	8.512	Monoruru.	Aug. 3.
S.	31 42						
N. & S.	47 58						
Gr. 2.5	60 28						
2.0	43 31						
1.5	31 1						
1.0	20 10						
Def. N.	30 5	...	...	...	8.512	Mounted circle C. 13 needle A.	5.
S.	32 32						
N. & S.	48 27						
Gr. 2.5	58 54						
2.0	43 54						
1.5	31 34						
1.0	20 12						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{\Delta}$ .	Dip.
1875. Aug. 11.	NORTH. 21° 15'	WEST. 157° 53'	NORTH.							NORTH.
			33° 44'	- 0° 22'	N.	+ 1° 31'	+ 34 43	+ 4 38	+ 0 17	39 38
			34 4	- 0 22	N.E.	+ 0 51				
			35 10	- 0 22	E.	- 0 31				
			36 4	- 0 22	S.E.	- 1 20				
			37 56	- 0 22	S.	- 1 33				
			35 59	- 0 22	S.W.	- 1 20				
			35 26	- 0 22	W.	- 0 31				
			34 28	- 0 22	N.W.	+ 0 47				
					N.					
					S.					
19.	19 53	154 51	33 19	- 0 23	E.	- 0 29	+ 32 27	+ 4 43	+ 0 16	37 26
20.	19 2	154 3	32 56	- 0 23	S.E.	- 1 13	+ 31 20	+ 4 50	+ 0 16	36 26
21.	17 32	153 34	30 18	- 0 28	S.E. $\frac{1}{2}$ E.	- 1 3	+ 28 47	+ 5 6	+ 0 16	34 9
22.	15 42	153 2	27 11	- 0 30	S.E. $\frac{3}{4}$ S.	- 1 2	+ 25 39	+ 5 19	+ 0 15	31 13
23.	14 16	152 34	24 56	- 0 32	S.E.	- 0 53	+ 23 31	+ 5 28	+ 0 15	29 14
24.	13 15	152 2	22 59	- 0 34	S.E. $\frac{1}{2}$ E.	- 0 45	+ 21 40	+ 5 32	+ 0 14	27 26
25.	12 41	152 0	22 12	- 0 35	S.S.E. $\frac{1}{2}$ E.	- 0 53	+ 20 41	+ 5 37	+ 0 14	26 35

Total Force (British Units) ( $\phi$ ).					REMARKS.	Date.	
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.			
Def. N.	29 51	8.27	...	+ 0.28	8.45 { Mounted circle C. 13 needle B. Swinging off Honoruru. }	1875. Aug. 11.	
N.	30 21	8.10	...	+ 0.42			
N.	31 11	7.82	...	+ 0.68			
N.	32 4	7.53	...	+ 0.89			
N.	32 14	7.48	...	+ 0.82			
N.	31 40	7.66	...	+ 0.79			
N.	31 38	7.67	...	+ 0.68			
N.	30 31	8.04	...	+ 0.42			
S.	32 18	8.30	...	+ 0.28			
S.	34 23	7.59	...	+ 0.82			
N.	31 31	7.76	7.77	+ 0.66	8.43	19.	
S.	34 0	7.75					
N. & S.	50 31	7.81					
N.	31 50	7.65	7.61	+ 0.86		8.47	20.
S.	34 28	7.60					
N. & S.	51 29	7.55					
Gr. 2.0	51 13	7.56					
1.5	35 50	7.58					
1.0	22 37	7.70	7.54	+ 0.78	8.32	21.	
Def. N.	32 6	7.57					
S.	34 39	7.54					
N. & S.	51 27	7.56					
Gr. 2.0	51 37	7.52					
1.5	36 22	7.49	7.40	+ 0.71	8.11	22.	
1.0	23 7	7.55					
Def. N.	32 24	7.49					
S.	35 5	7.39					
N. & S.	51 49	7.48					
Gr. 1.5	37 12	7.36	7.37	+ 0.72	8.06	23.	
1.0	23 56	7.30					
Def. N.	32 46	7.38					
S.	35 14	7.36					
N. & S.	52 41	7.28					
N.	32 39	7.42	7.37	+ 0.63	8.00	24.	
S.	35 12	7.37					
N. & S.	52 15	7.38					
Gr. 1.5	37 19	7.34					
1.0	23 47	7.35	7.40	+ 0.62	8.02	25.	
Def. N.	32 41	7.42					
S.	35 15	7.35					
N. & S.	52 27	7.33					
Gr. 1.5	37 6	7.38					
1.0	23 19	7.50					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1875. Aug. 26.	NORTH. $11^{\circ} 16'$	WEST. $152^{\circ} 5'$	NORTH. $19^{\circ} 19'$	$-0^{\circ} 38'$	S.S.E. $\frac{1}{2}$ E.	$-0^{\circ} 50'$	$+17^{\circ} 51'$	$+5^{\circ} 48'$	$+0^{\circ} 13'$	NORTH. $23^{\circ} 52'$
27.	10 38	152 10	18 18	-0 39	S.E. $\frac{1}{2}$ E.	-0 37	+17 2	+5 46	+0 13	23 1
„	10 20	151 41	17 36	-0 40	S.E. $\frac{1}{2}$ E.	-0 35	+16 21	+5 49	+0 12	22 22
28.	9 27	150 48	16 7	-0 41	S.E.	-0 35	+11 51	+5 54	+0 11	20 56
29.	8 37	150 2	14 20	-0 43	S.E.	-0 31	+13 6	+5 58	+0 11	19 15
30.	7 34	149 50	11 45	-0 43	S.W. $\frac{1}{2}$ W.	-0 22	+10 40	+6 4	+0 19	17 3
31.	7 8	149 31	12 55	-0 45	E. $\frac{1}{2}$ N.	-0 9	+12 1	+5 59	+0 20	18 20
Sept. 1.	7 22	147 22	11 53	-0 46	S.S.E.	-0 32	+10 36	+6 4	+0 19	16 59
„	6 55	147 21	10 20	-0 47	S.W.	-0 23	+ 9 10	+6 7	+0 18	15 35

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	32 49	7.38	7.33	+0.57	7.90		1875.
S.	35 13	7.36					Aug. 26.
N. & S.	52 30	7.32					
Grs. 2.0	53 6	7.39					
1.5	38 17	7.19					
1.0	23 53	7.33					
Def. N.	32 56	7.34	7.35	+0.55	7.90		27.
S.	35 16	7.35					
N. & S.	52 19	7.36					
Grs. 2.0	51 50	7.52					
1.5	38 18	7.20					
1.0	23 48	7.36					
Def. N.	32 46	7.39	7.36	+0.53	7.89		"
S.	35 19	7.33					
N. & S.	52 18	7.36					
N.	32 51	7.36	7.37	+0.57	7.94		28.
S.	35 24	7.30					
N. & S.	52 18	7.36					
Grs. 2.0	52 51	7.41					
1.5	37 44	7.29					
1.0	23 27	7.48					
Def. N.	32 59	7.33	7.36	+0.53	7.89		29.
S.	35 25	7.30					
N. & S.	52 36	7.31					
Grs. 2.0	53 55	7.31					
1.5	37 26	7.35					
1.0	23 7	7.58					
Def. N.	32 15	7.56	7.54	+0.42	7.96		30.
S.	34 44	7.53					
N. & S.	51 41	7.52					
Grs. 2.0	52 9	7.50					
1.5	36 27	7.52					
1.0	23 4	7.60					
Def. N.	31 56	7.65	7.59	+0.33	7.92		31.
S.	34 46	7.52					
N. & S.	51 24	7.60					
N.	32 50	7.39					
S.	35 22	7.32					
N. & S.	52 17	7.38	7.36	+0.44	7.80		Sept. 1.
Grs. 2.0	53 34	7.36					
1.5	37 45	7.30					
1.0	23 46	7.39					
Def. N.	32 27	7.50	7.47	+0.39	7.86		"
S.	34 51	7.49					
N. & S.	52 2	7.43					

Date.	Geographical Position.		Inclination or Dip ( $\theta'$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	1 d.	Dip.
1875. Sept. 3.	NORTH. 4° 32'	WEST. 147° 45'	NORTH. 6° 10'	- 0° 47'	s. b.w.	- 0° 14'	+ 5° 9'	+ 6° 13'	+ 0° 14'	NORTH. 11° 36'
„	3 37	147 45	3 43	- 0 54	s. $\frac{1}{2}$ w.	- 0 7	+ 2 42	+ 6 17	+ 0 11	9 10
4.	2 19	149 11	0 39	- 0 57	s. $\frac{1}{2}$ w.	+ 0 1	- 0 17	+ 6 20	+ 0 7	6 10
5.	1 4	150 37	SOUTH. 1 37	- 0 59	s. $\frac{1}{2}$ E	+ 0 6	- 2 30	+ 6 21	+ 0 5	3 56
„	0 28	150 40	2 29	- 1 0	s. $\frac{1}{4}$ w.	+ 0 9	- 3 20	+ 6 18	+ 0 3	3 1
6.	SOUTH. 0 35	151 35	5 5	- 1 3	s. $\frac{1}{2}$ w.	+ 0 18	- 5 50	+ 6 17	0 0	0 27
7.	2 8	152 33	7 41	- 1 5	s. $\frac{1}{4}$ w.	+ 0 22	- 8 24	+ 6 15	- 0 2	SOUTH. 2 11
„	2 50	152 28	9 29	- 1 6	s. s. E.	+ 0 26	- 10 9	+ 6 12	- 0 5	4 2

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	32 46	7.41	7.39	+ 0.34	7.73		1875.
S.	35 11	7.39					
N. & S.	52 15	7.38					
Gr. 2.0	53 16	7.39					Sept. 3.
1.5	37 31	7.35					
1.0	23 46	7.40					
Def. N.	32 45	7.42	7.43	- 0.29	7.72		"
S.	35 5	7.41					
N. & S.	52 23	7.35					
Gr. 1.5	36 58	7.45					
1.0	23 20	7.53					
Def. N.	32 42	7.43	7.46	+ 0.24	7.70		4.
S.	35 12	7.39					
N. & S.	52 14	7.39					
Gr. 2.0	51 28	7.57					
1.5	36 54	7.46					
1.0	23 23	7.52					
Def. N.	32 22	7.55	7.49	+ 0.21	7.70		5.
S.	34 56	7.47					
N. & S.	52 0	7.45					
Gr. 2.0	51 27	7.58					
1.5	36 48	7.49					
1.0	23 50	7.39					
Def. N.	32 14	7.59	7.54	+ 0.19	7.73		"
S.	34 49	7.51					
N. & S.	51 58	7.46					
Gr. 2.0	51 56	7.54					
1.5	36 18	7.58					
Def. N.	32 16	7.58	7.56	+ 0.14	7.70		6.
S.	34 42	7.55					
N. & S.	51 45	7.51					
Gr. 2.0	51 46	7.55					
1.5	36 35	7.53					
1.0	23 3	7.63					
Def. N.	31 52	7.70	7.66	+ 0.11	7.77		7.
S.	34 18	7.68					
N. & S.	51 18	7.63					
Gr. 2.0	50 17	7.71					
1.5	35 20	7.76					
1.0	23 30	7.50					
Def. N.	32 10	7.61	7.60	+ 0.08	7.68		"
S.	34 30	7.61					
N. & S.	51 27	7.59					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\sin \theta}$ .	$\frac{1}{\theta}$ .	Dip.
1875. Sept. 9.	SOUTH. 4° 42'	WEST. 153° 9'	SOUTH. 13° 31'	-1° 10'	S.S.E. $\frac{1}{2}$ E.	+0° 35'	-14° 6'	+6° 4'	-0° 10'	SOUTH. 8° 12'
„	5 12	152 52	14 16	-1 11	S.S.E. $\frac{1}{2}$ E.	+0 38	-14 49	+6 2	-0 11	8 58
10.	6 19	152 40	16 1	-1 12	S.E.	+0 40	-16 33	+5 57	-0 13	10 49
„	6 43	152 23	16 50	-1 14	S.E.	+0 42	-17 22	+5 54	-0 14	11 42
11.	7 26	152 14	18 36	-1 16	S.S.E.	+0 48	-19 4	+5 52	-0 16	13 28
12.	8 18	151 59	20 29	-1 17	S. <sup>b</sup> E.	+0 57	-20 49	+5 45	-0 18	15 22
13.	9 51	151 7	22 21	-1 18	S.E. <sup>b</sup> E.	+0 48	-22 54	+5 37	-0 20	17 38
„	10 26	150 35	23 47	-1 19	S.E.	+0 57	-24 9	+5 30	-0 21	19 0
14.	11 19	150 28	25 37	-1 21	S.S.E.	+1 7	-25 51	+5 24	-0 22	20 19
15.	12 0	150 20	26 25	-1 22	S.E.	+1 4	-26 43	+5 20	-0 23	21 16
„	12 32	149 59	27 30	-1 23	S.E. <sup>b</sup> S.	+1 9	-27 14	+5 17	-0 24	22 51

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	31 41	7.77	7.80	0.00	7.80		1875.
S.	34 7	7.75					
N. & S.	50 55	7.73					
Grs. 2.0	50 0	7.75					Sept. 9.
1.5	34 40	7.91					
1.0	22 20	7.87	7.78	-0.02	7.76		
Def. N.	31 37	7.80					
S.	33 55	7.82					
N. & S.	50 55	7.73					"
N.	31 30	7.84					
S.	34 1	7.79	7.88	-0.01	7.87		10.
N. & S.	50 29	7.85					
Grs. 2.0	49 33	7.80					
1.5	34 41	7.90					
1.0	21 45	8.08					
Def. N.	31 30	7.84	7.83	-0.02	7.81		
S.	33 57	7.81					
N. & S.	50 32	7.84					"
N.	31 15	7.92					
S.	33 30	7.95					
N. & S.	50 5	7.96	7.96	-0.09	7.87		11.
Grs. 2.0	47 35	8.04					
1.5	34 37	7.93					
Def. N.	30 55	8.04					
S.	33 17	8.04					12.
N. & S.	49 49	8.05	8.11	-0.13	7.98		
N.	30 46	8.09					
S.	33 3	8.12					
N. & S.	49 36	8.11					13.
Grs. 2.0	47 1	8.12					
1.5	33 48	8.10	8.20	-0.14	8.06		
Def. N.	30 27	8.21					
S.	32 44	8.23					
N. & S.	49 22	8.17					"
...	...	...					14.
N.	30 9	8.32	8.37	-0.19	8.18		
S.	32 21	8.36					
N. & S.	48 52	8.32					
Grs. 2.5	65 0	8.31					15.
2.0	45 30	8.34					
1.5	31 56	8.54	8.40	-0.22	8.18		
1.0	20 52	8.43					
Def. N.	29 55	8.40					
S.	32 13	8.41					"
N. & S.	48 40	8.38					

Date.	Geographical Position.			Inclination or Dip ( $\theta$ ).						
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1875. Sept. 16.	SOUTH. 13° 31'	WEST. 149° 30'	SOUTH. 29° 23'	- 1° 24'	S. $\frac{1}{2}$ E.	+ 1° 24'	- 29° 23'	+ 5° 10'	- 0° 26'	SOUTH. 24° 39'
17.	14 53	149 41	31 46	- 1 27	S. $\frac{1}{2}$ E.	+ 1 28	- 31 45	+ 4 58	- 0 28	27 15
„	15 48	149 41	33 2	- 1 28	S. $\frac{1}{2}$ E.	+ 1 32	- 32 58	+ 4 54	- 0 92	28 33
18.	17 8	149 49	34 7	- 1 28	S.S.E.	+ 1 28	- 34 7	+ 4 45	- 0 30	29 52
22.	17 31	149 33	28 31	- 1 29	...	...	...	...	...	30 3
23.	„	„	29 44	- 0 19	...	...	...	...	...	30 3

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. n.	29 23	8.59	8.55	- 0.28	8.27		1875.
s.	31 50	8.55					Sept. 16.
n. & s.	48 17	8.49					
Grs. 2.5	62 52	8.48					
2.0	44 21	8.51					
1.5	31 28	8.65					
1.0	20 25	8.61					
Def. n.	29 9	8.68	8.73	- 0.32	8.41		17.
s.	31 37	8.64					
n. & s.	47 45	8.65					
Grs. 2.5	58 47	8.82					
2.0	42 51	8.74					
1.5	30 50	8.81					
1.0	20 0	8.78					
Def. n.	28 48	8.80	8.83	- 0.33	8.50		"
s.	31 11	8.82					
n. & s.	47 19	8.78					
Grs. 2.5	57 35	8.94					
Def. n.	28 41	8.85	8.91	- 0.33	8.58		18.
s.	31 8	8.83					
n. & s.	47 12	8.82					
Grs. 2.5	56 52	9.01					
2.0	42 12	8.87					
1.5	30 8	9.01					
1.0	19 32	9.00					
Def. n.	30 5	...	...	...	8.358	Tahiti.	22.
s.	32 25	...	...	...	...		
n. & s.	48 49	...	...	...	...		
Grs. 2.5	64 49	...	...	...	...		
2.0	45 31	...	...	...	...		
1.5	32 53	...	...	...	...		
1.0	21 8	...	...	...	...		
Def. n.	30 5	...	...	...	8.358	" Mounted circle C. 13 needle A.	23.
s.	32 26	...	...	...	...		
n. & s.	48 38	...	...	...	...		
Grs. 2.5	61 27	...	...	...	...		
2.0	44 20	...	...	...	...		
1.5	32 3	...	...	...	...		
1.0	20 50	...	...	...	...		

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{d.}$ .	Dip.
1875. Oct. 3.	SOUTH. $17^{\circ} 31'$	WEST. $149^{\circ} 34'$	SOUTH. $31^{\circ} 2'$ $31^{\circ} 29'$ $33^{\circ} 10'$ $34^{\circ} 9'$ $34^{\circ} 16'$ $33^{\circ} 12'$ $33^{\circ} 0'$ $31^{\circ} 32'$	$-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$ $-1^{\circ} 28'$	N. N.E. E. S.E. S. S.W. W. N.W.	$-1^{\circ} 33'$ $-0^{\circ} 53'$ $+0^{\circ} 25'$ $+1^{\circ} 20'$ $+1^{\circ} 34'$ $+1^{\circ} 15'$ $+0^{\circ} 25'$ $-0^{\circ} 52'$	$-34^{\circ} 3'$	$+4^{\circ} 54'$	$-0^{\circ} 44'$	$29^{\circ} 53'$
4.	18 46	149 50	36 36	$-1^{\circ} 28'$	S. <sup>b</sup> E.	$+1^{\circ} 29'$	$-36^{\circ} 35'$	$+4^{\circ} 38'$	$-0^{\circ} 47'$	32 44
5.	20 44	150 16	39 58	$-1^{\circ} 29'$	S. <sub>2</sub> E.	$+1^{\circ} 25'$	$-40^{\circ} 2'$	$+4^{\circ} 13'$	$-0^{\circ} 50'$	36 39
„	21 22	150 10	41 8	$-1^{\circ} 29'$	S. <sup>b</sup> E.	$+1^{\circ} 22'$	$-41^{\circ} 15'$	$+4^{\circ} 3'$	$-0^{\circ} 50'$	38 2
6.	22 22	150 17	42 29	$-1^{\circ} 30'$	S. <sup>b</sup> E. <sub>1</sub> E.	$+1^{\circ} 17'$	$-42^{\circ} 42'$	$+3^{\circ} 52'$	$-0^{\circ} 51'$	39 41
7.	23 32	150 9	43 55	$-1^{\circ} 30'$	S.S.E.	$+1^{\circ} 13'$	$-44^{\circ} 12'$	$+3^{\circ} 43'$	$-0^{\circ} 51'$	41 20
8.	24 47	148 5	44 58	$-1^{\circ} 31'$	S.E. <sub>2</sub> E.	$+0^{\circ} 53'$	$-45^{\circ} 36'$	$+3^{\circ} 32'$	$-0^{\circ} 51'$	42 55
9.	26 14	145 3	47 33	$-1^{\circ} 32'$	S.E. <sup>b</sup> E.	$+0^{\circ} 44'$	$-48^{\circ} 21'$	$+3^{\circ} 14'$	$-0^{\circ} 52'$	45 59

Total Force (British Units) ( $\phi$ ).

Deflectors or Grains.		Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.	REMARKS.	Date.
								1875.
Def.	N.	28 0	9.12	...	-0.46	8.62	Mounted circle C. 13 needle B. Swinging off Tahiti.	Oct. 3.
	N.	28 11	9.05	...	-0.39			
	N.	28 35	8.90	...	-0.30			
	N.	28 43	8.86	...	-0.29			
	N.	28 32	8.93	...	-0.33			
	N.	28 29	8.94	...	-0.30			
	N.	28 50	8.81	...	-0.29			
	N.	28 3	9.10	...	-0.39			
	S.	30 28	9.09	...	-0.46			
	S.	30 52	8.94	...	-0.33			
	N.	28 10	9.06	9.08	-0.31	8.77		4.
	S.	30 47	8.97					
	N. & S.	46 17	9.12					
Grs.	2.0	41 51	8.95					
	1.5	29 17	9.27					
	1.0	19 22	9.09					
Def.	N.	27 34	9.28	9.31	-0.30	9.01		5.
	S.	29 51	9.32					
	N. & S.	45 43	9.32					
Grs.	1.5	29 2	9.34					
Def.	N.	27 21	9.36	9.35	-0.29	9.06		"
	S.	29 44	9.37					
	N. & S.	45 45	9.31					
	N.	27 1	9.48	9.59	-0.28	9.31		6.
	S.	29 27	9.49					
	N. & S.	45 2	9.50					
Grs.	2.5	50 30	9.80					
	2.0	39 18	9.43					
	1.5	27 43	9.75					
	1.0	18 10	9.65					
Def.	N.	26 38	9.64	9.71	-0.28	9.43	Rolling heavily.	7.
	S.	28 58	9.69					
	N. & S.	41 38	9.70					
Grs.	2.5	50 2	9.87					
	2.0	38 35	9.58					
	1.5	27 43	9.75					
	1.0	17 56	9.77					
Def.	N.	26 13	9.81	9.84	-0.32	9.52		8.
	S.	28 32	9.87					
	N. & S.	41 25	9.78					
Grs.	1.5	27 11	9.91					
Def.	N.	25 51	9.96	9.91	-0.33	9.58	Rolling heavily.	9.
	S.	28 19	9.96					
	N. & S.	41 10	9.86					
Grs.	2.0	37 14	9.88					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1875. Oct. 10.	SOUTH. 27° 34'	WEST. 143° 7'	SOUTH. 48° 16'	-1° 33'	S.E. <sup>b</sup> E.	+0° 40'	-49° 9'	+3° 8'	-0° 52'	SOUTH. 46° 53'
„	27 46	142 15	46 50	-1 33	E.S.E.	+0 37	-47 46	+3 18	-0 52	45 20
11.	28 24	141 18	48 46	-1 33	S.E.	+0 45	-49 34	+3 7	-0 52	47 19
12.	29 30	140 31	49 18	-1 34	S.E.	+0 45	-50 7	+3 2	-0 52	47 57
13.	30 49	139 18	51 10	-1 35	S.E.	+0 41	-52 4	+2 49	-0 51	50 6
„	31 16	138 36	51 43	-1 35	S.E.	+0 41	-52 37	+2 44	-0 51	50 44
14.	32 36	137 42	52 18	-1 36	E. <sup>b</sup> S.	+0 39	-53 15	+2 40	-0 51	51 26
15.	33 12	135 14	53 17	-1 36	E.	+0 10	-54 43	+2 39	-0 50	53 4

Deflectors or Grains.	Angle.	Total Force (British Units) ( $\phi$ ).			Correction for Ship's Head.	Total Force.	REMARKS.	Date.
		$\phi$ .	Mean $\phi$ .					
Def. N.	25 42	10.02	9.94	- 0.33	9.61	{	East face only observed. Lurching.	1875. } Oct. 10.
S.	28 25	9.92						
N. & S.	44 9	9.87						
N.	25 50	9.97	10.03	- 0.31	9.69	{		"
S.	28 2	10.08						
N. & S.	43 51	9.97						
Grs. 2.5	48 22	10.12						
2.0	37 13	9.88						
1.0	17 10	10.19						
Def. N.	25 40	10.03	10.06	- 0.32	9.74	{		11.
S.	28 22	9.94						
N. & S.	43 27	10.12						
Grs. 2.5	48 46	10.06						
2.0	36 14	10.11						
1.5	26 13	10.26	10.06	- 0.32	9.74	{		12.
1.0	17 42	9.89						
Def. N.	25 17	10.19						
S.	27 44	10.20						
N. & S.	43 37	10.06						
Grs. 2.5	47 22	10.28	10.27	- 0.32	9.95	{		13.
2.0	36 12	10.12						
1.5	27 27	9.83						
1.0	18 0	9.73						
Def. N.	25 7	10.26						
S.	27 39	10.24	10.27	- 0.32	9.95	{		14.
N. & S.	43 4	10.26						
Grs. 2.5	47 7	10.32						
2.0	35 28	10.30						
1.5	26 7	10.29						
1.0	17 3	10.25	10.37	- 0.33	10.04	{		"
Def. N.	25 6	10.27						
S.	27 6	10.47						
N. & S.	42 47	10.36						
N.	24 32	10.51						
S.	27 1	10.50	10.59	- 0.38	10.21	{		15.
N. & S.	42 23	10.52						
Grs. 2.5	44 37	10.77						
2.0	34 33	10.55						
1.5	25 7	10.68						
Def. N.	24 21	10.59	10.63	- 0.40	10.23	{		
S.	26 16	10.61						
N. & S.	42 19	10.55						
Grs. 2.5	44 36	10.77						
2.0	34 12	10.64						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A/H.	$\frac{1}{d}$ .	Dip.
1875. Oct. 16.	SOUTH. 33° 29'	WEST. 133° 18'	SOUTH. 54° 5'	-1° 37'	E. <sup>b</sup> s.	+0° 17'	-55° 25'	+2° 34'	-0° 49'	SOUTH. 53° 50'
17.	34 5	131 37	50 3	-1 37	S.W. <sup>1</sup> / <sub>2</sub> S.	+0 45	-50 55	+3 0	-0 51	48 56
18.	35 53	132 27	53 6	-1 38	S. <sup>b</sup> E.	+1 2	-53 42	+2 40	-0 50	51 52
19.	36 36	132 53	55 2	-1 39	S. <sup>1</sup> / <sub>2</sub> W.	+1 3	-55 37	+2 30	-0 49	53 56
20.	38 47	133 23	57 27	-1 39	S.S.E.	+0 52	-58 14	+2 12	-0 47	56 49
„	39 15	133 14	58 11	-1 40	S.S.E.	-0 51	-58 59	+2 9	-0 47	57 37
21.	40 6	132 55	58 53	-1 40	S.E. <sup>b</sup> E.	+0 23	-60 10	+2 0	-0 46	58 56
22.	40 4	131 40	57 17	-1 41	N.N.E.	-0 51	-59 49	+2 2	-0 46	58 33
23.	39 47	130 55	57 57	-1 42	E. <sup>b</sup> N.	-0 2	-59 41	+2 1	-0 46	58 26

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflections or Grains.	Angle.	$\phi^\circ$ .	Mean $\phi^\circ$ .	Correction for Ship's Head.	Total Force.		
Def. N.	24 31	10.52	10.56	-0.38	10.18		1875,
S.	27 10	10.41					Oct. 16.
N. & S.	42 31	10.17					
Grs. 2.5	45 28	10.61					
2.0	33 45	10.76					
Def. N.	24 25	10.56	10.67	-0.32	10.35		17.
S.	26 41	10.65					
N. & S.	42 12	10.59					
Grs. 2.5	44 29	10.80					
2.0	34 8	10.66					
1.0	16 13	10.76					
Def. N.	23 41	10.89	10.90	-0.23	10.67		18.
S.	26 25	10.77					
N. & S.	41 35	10.84					
Grs. 2.5	43 8	11.06					
2.0	33 4	10.96					
Def. N.	23 40	10.90	11.01	-0.22	10.79		19.
S.	25 53	11.02					
N. & S.	41 19	10.94					
Grs. 2.5	42 45	11.14					
2.0	32 44	11.06					
Def. N.	22 54	11.27	11.38	-0.23	11.15		20.
S.	25 16	11.32					
N. & S.	40 37	11.24					
Grs. 2.5	40 46	11.59					
2.0	31 0	11.61					
1.5	23 45	11.24					
Def. N.	22 32	11.44	11.43	-0.22	11.21		"
S.	24 57	11.47					
N. & S.	40 16	11.39					
N.	22 32	11.44					
S.	24 53	11.51					
N. & S.	40 11	11.43	11.58	-0.36	11.22		21.
Grs. 2.5	40 16	11.71					
2.0	31 1	11.62					
1.5	23 8	11.53					
1.0	14 41	11.85					
Def. N.	22 15	11.58	11.67	-0.66	11.01		22.
S.	24 45	11.57					
N. & S.	39 48	11.60					
Grs. 2.5	39 11	11.97					
2.0	30 42	11.73					
1.5	23 14	11.48	11.73				23.
1.0	14 50	11.73					
...	...	...	...	...	...		

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1875.	SOUTH.	WEST.	SOUTH.							SOUTH.
Oct. 24.	39° 28'	127° 44'	57° 22'	-1° 43'	E. <sup>b</sup> N.	-0° 2'	-59° 7'	+2° 4'	-0° 47'	57° 50'
25.	39 16	124 1	56 37	-1 44	E. <sup>b</sup> N.	-0 2	-58 23	+2 8	-0 47	57 2
26.	39 13	120 55	56 7	-1 45	E. <sup>b</sup> N.	-0 2	-57 54	+2 10	-0 48	56 32
27.	39 13	118 42	55 33	-1 46	E. <sup>b</sup> N.	-0 2	-57 21	+2 13	-0 48	55 56
28.	38 56	116 20	54 25	-1 47	E.N.E.	-0 13	-56 25	+2 19	-0 49	55 55
29.	38 45	112 56	54 31	-1 48	E. <sup>b</sup> N.	-0 1	-56 20	+2 17	-0 49	54 52
30.	38 43	111 21	54 3	-1 48	E. <sup>b</sup> N.	-0 1	-55 52	+2 19	-0 49	54 22

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
							1875.
Def. s.	22 57	11.24	11.41	- 0.46	10.95		Oct. 24.
s.	24 34	11.67					
N. & s.	40 24	11.33					
s.	23 12	11.12	11.13	- 0.46	10.67		25.
s.	25 57	10.98					
N. & s.	40 50	11.14					
Grts. 2.0	31 52	11.33					
1.5	23 45	11.24					
1.0	15 51	10.99					
Def. s.	23 37	10.92	11.10	- 0.46	10.64		26.
s.	26 0	10.96					
N. & s.	41 30	10.87					
Grts. 2.5	41 6	11.51					
2.0	32 46	11.06					
1.5	23 45	11.24					
1.0	15 36	11.16					
Def. s.	23 55	10.78	11.02	- 0.45	10.57		27.
s.	25 44	11.09					
N. & s.	41 51	10.73					
Grts. 2.5	41 37	11.39					
2.0	32 36	11.11					
Def. s.	23 42	10.88	11.08	- 0.48	10.60		28.
s.	25 51	11.03					
N. & s.	41 34	10.84					
Grts. 2.5	42 6	11.28					
2.0	32 40	11.09					
1.5	24 0	11.13					
1.0	15 23	11.32					
Def. s.	24 13	10.65	10.92	- 0.45	10.47		29.
s.	26 6	10.92					
N. & s.	41 47	10.77					
Grts. 2.5	43 17	11.03					
2.0	33 23	10.88					
1.5	24 15	11.03					
1.0	15 35	11.18					
Def. s.	24 29	10.53	10.82	- 0.44	10.38		30.
s.	26 33	10.71					
N. & s.	41 53	10.73					
Grts. 2.5	43 38	10.96					
2.0	33 27	10.86					
1.5	25 6	10.67					
1.0	15 27	11.26					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1875. Oct. 31.	SOUTH. 38° 30'	WEST. 108° 14'	SOUTH. 54° 3'	-1° 49'	E.b.N.	-0° 1'	-55° 53'	+2° 18'	-0° 49'	SOUTH. 54° 24'
Nov. 1.	39 5	104 52	53 1	-1 50	E.b.N. $\frac{1}{2}$ N.	-0 7	-54 58	+2 26	-0 50	53 22
2.	39 18	101 38	52 40	-1 51	E.b.N. $\frac{1}{2}$ N.	-0 7	-54 38	+2 29	-0 50	52 59
3.	39 18	98 34	51 54	-1 52	N.E. $\frac{1}{2}$ E.	-0 33	-54 19	+2 33	-0 51	52 37
4.	38 42	96 38	49 14	-1 53	N.N.E. $\frac{1}{2}$ E.	-0 56	-52 3	+2 50	-0 51	50 4
5.	38 10	94 15	48 20	-1 54	N.E. $\frac{1}{2}$ E.	-0 36	-50 50	+2 57	-0 51	48 44

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	24 22	10.58	10.60	- 0.44	10.16		1875.
S.	26 43	10.64					
N. & S.	42 17	10.57					
Gr. 2.5	44 22	10.82					Oct. 31.
2.0	35 5	10.42					
1.5	25 58	10.33					
1.0	16 2	10.85					
Def. N.	24 54	10.35	10.56	- 0.45	10.11		Nov. 1.
S.	27 4	10.48					
N. & S.	42 59	10.30					
Gr. 2.5	44 58	10.71					
2.0	35 22	10.34					
1.5	25 34	10.49					
1.0	16 14	10.73					
Def. N.	24 55	10.35	10.38	- 0.44	9.94		2.
S.	27 16	10.40					
N. & S.	43 0	10.29					
Gr. 2.5	46 43	10.39					
2.0	35 21	10.35					
1.5	25 28	10.53					
1.0	16 48	10.37					
Def. N.	25 20	10.19	10.30	- 0.51	9.79		3.
S.	27 32	10.29					
N. & S.	43 2	10.28					
Gr. 2.5	46 20	10.45					
2.0	36 10	10.15					
1.5	26 19	10.20					
1.0	16 30	10.56					
Def. N.	25 43	10.02	10.09	- 0.57	9.52		4.
S.	27 58	10.10					
N. & S.	43 39	10.05					
Gr. 2.5	47 31	10.26					
2.0	36 33	10.06					
1.5	26 57	9.98					
1.0	17 8	10.18					
Def. N.	26 35	9.67	9.85	- 0.49	9.36		5.
S.	29 0	9.68					
N. & S.	44 21	9.81					
Gr. 2.5	48 39	10.08					
2.0	37 26	9.86					
1.5	26 56	9.98					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1875. Nov. 6.	SOUTH. 37° 53'	WEST. 93° 57'	SOUTH. 47° 44'	- 1° 55'	N. <sup>b</sup> E.	- 1° 7'	- 50° 46'	+ 2° 58'	- 0° 51'	SOUTH. 48° 39'
7.	37 25	93 40	48 29	- 1 55	E. <sup>b</sup> N. <sub>2</sub> N.	- 0 7	- 50 31	+ 3 0	- 0 51	48 22
8.	37 57	90 56	48 12	- 1 56	E.N.E.	- 0 14	- 50 22	+ 3 1	- 0 52	48 13
9.	38 5	87 47	47 17	- 1 57	N.E. <sup>b</sup> E. <sub>2</sub> E.	- 0 21	- 49 35	+ 3 10	- 0 52	47 17
10.	38 17	84 51	46 45	- 1 58	E. <sub>2</sub> N.	+ 0 8	- 48 35	+ 3 19	- 0 52	46 8
11.	37 23	83 0	43 3	- 1 58	N.N.E.	- 1 8	- 46 9	+ 3 39	- 0 51	43 21
12.	36 1	81 34	40 43	- 1 59	N.N.E.	- 1 9	- 43 51	+ 3 58	- 0 51	40 44

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	26 2	9.90	9.93	- 0.58	9.35		1875.
S.	28 23	9.93					
N. & S.	41 16	9.84					
Grs. 2.5	48 13	10.15					
2.0	37 12	9.91					
1.5	27 7	9.92	9.69	- 0.43	9.26		Nov. 6.
1.0	17 45	9.83					
Def. N.	26 32	9.69					
S.	29 5	9.65					
N. & S.	44 57	9.60					
Grs. 2.5	48 23	10.12	9.65	- 0.44	9.21		7.
2.0	37 40	9.81					
1.5	28 7	9.60					
1.0	18 44	9.33					
Def. N.	26 49	9.58				9.36	
S.	29 15	9.58					
N. & S.	45 13	9.50					
Grs. 2.5	50 15	9.84					
2.0	38 39	9.60					
1.5	27 42	9.73	9.06	- 0.39	8.67	9.	
1.0	17 54	9.74					
Def. N.	27 15	9.42					
S.	29 52	9.32					
N. & S.	45 28	9.42					
Grs. 2.0	40 3	9.32	9.07	- 0.54	8.53	10.	
1.5	28 38	9.44					
1.0	18 54	9.25					
Def. N.	28 0	9.14					
S.	30 38	9.03					
N. & S.	46 10	9.18	8.75	- 0.51	8.24	11.	
Grs. 2.0	40 57	9.15					
1.5	30 20	8.96					
1.0	19 39	8.91					
Def. N.	28 5	9.11					8.76
S.	30 52	8.94					
N. & S.	46 41	9.01					
Grs. 2.5	55 28	9.19					
2.0	41 35	9.04					
1.5	29 22	9.22	8.75				
1.0	19 27	8.99					
Def. N.	29 2	8.76					
S.	31 40	8.63	8.75	- 0.51	8.24		
N. & S.	47 51	8.64					
Grs. 2.0	43 1	8.79					
1.5	30 38	8.88					
1.0	19 53	8.80					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
	SOUTH.	WEST.	SOUTH.							SOUTH.
1875. Nov. 12.	35° 33'	81° 2'	49° 10'	-1° 59'	N.N.E.	-1° 10'	-43° 19'	+4° 4'	-0° 51'	40° 6'
13.	34 20	79 38	38 18	-2 0	N.N.E.	-1 13	-41 31	+4 18	-0 50	38 3
15.	33 38	78 53	37 58	-1 42	...	...	...	...	...	39 40
16.	33 54	76 38	38 9	-2 1	E.N.E.	-0 16	-40 26	+4 29	-0 50	36 47
17.	34 6	73 49	36 8	-2 2	N.E. $\frac{1}{2}$ N.	-0 56	-39 6	+4 43	-0 49	35 12
18.	34 1	72 4	34 43	-2 3	N.	-1 28	-38 14	+4 53	-0 48	34 9
Dec. 1.	33 1	71 38	31 44	-2 3	...	...	...	...	...	33 47

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. n.	29° 4'	8.75	8.70	- 0.51	8.19	Juan Fernandez island,	1875.
s.	31 32	8.68					Nov. 12.
N. & S.	47 47	8.66					
n.	29 54	8.45	8.41	- 0.49	7.95		13.
s.	32 2	8.49					
N. & S.	48 17	8.51					
Grs. 2.0	45 28	8.41					
1.5	32 26	8.43					
1.0	20 58	8.36					
Def. n.	30 32	...	...	...	8.138		15.
s.	33 19						
N. & S.	49 49						
Grs. 2.0	47 47						
1.5	34 1						
1.0	21 51						
Def. n.	31 8	8.02	7.96	- 0.37	7.59		16.
s.	33 41	7.92					
N. & S.	50 19	7.93					
Grs. 2.0	48 10	8.06					
1.5	34 40	7.95					
1.0	22 21	7.86					
Def. n.	31 16	7.97	7.95	- 0.45	7.50		17.
s.	33 37	7.94					
N. & S.	50 15	7.95					
Grs. 2.0	49 4	7.94					
1.5	35 3	7.87					
1.0	21 56	8.00					
Def. n.	31 10	8.01	7.99	- 0.48	7.51		18.
s.	33 24	8.02					
N. & S.	50 15	7.95					
Grs. 2.0	48 56	7.96					
1.5	34 33	7.97					
1.0	21 51	8.03					
Def. n.	32 58	...	...	...	7.400	Valparaiso.	Dec. 1.
s.	35 16						
N. & S.	52 24						
Grs. 2.0	54 18						
1.5	37 34						
1.0	23 48						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{\alpha}$ .	Dip.
1875. Dec. 1.	SOUTH. 33° 1'	WEST. 71° 38'	SOUTH. 33° 31'	- 0° 16'	...	...	...	...	...	SOUTH. 33° 47'
11.	33 0	71 37	34 39 35 16 36 46 37 38 37 41 37 30 36 43 35 27	- 0 16 - 0 16 - 0 16 - 0 16 - 0 16 - 0 16 - 0 16 - 0 16	N. N.E. E. S.E. S. S.W. W. N.W.	- 1 11 - 0 52 + 0 15 + 1 5 + 1 13 + 0 48 + 0 16 - 0 34	- 36 36	+ 4 49	- 0 47	32 34
					N. S.					
					N. S. S.	- 1 11 + 1 13				
„	33 0	71 37	33 33 36 32	- 2 3 - 2 3	N. N. S. S.	- 1 11 + 1 13	- 37 4	+ 4 45	- 0 47	33 6
12.	32 34	74 17	38 35	- 0 17	S. $\frac{1}{2}$ E.	+ 1 12				
					S. $\frac{1}{2}$ E.	+ 1 12				
13.	33 19	74 22	38 58	- 0 17	S. $\frac{1}{2}$ E.	+ 1 12				
					S. $\frac{1}{2}$ E.	+ 1 12				
14.	33 31	74 44	39 2	- 0 17	W. $\frac{1}{2}$ S.	+ 0 20	- 38 59	+ 4 26	- 0 50	35 23
15.	33 12	76 23	39 38	- 0 17	S.W. $\frac{1}{2}$ W.	+ 0 38	- 39 17	+ 4 22	- 0 50	35 45

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. s. 32 56'		...	...	...	7.400	Valparaiso. Mounted circle C. 13 needle A.	1875.
s. 35 12							} Dec. 1.
N. & s. 52 5							
Grs. 2.0 53 9							
1.5 36 32							
1.0 23 39							
Def. s. 31 38		7.84	...	-0.48	7.40	Swinging off Valparaiso.	11.
s. 31 50		7.75	...	-0.44			
s. 32 6		7.67	...	-0.24			
s. 32 32		7.54	...	-0.11			
s. 32 39		7.50	...	-0.09			
s. 32 22		7.59	...	-0.15			
s. 32 18		7.61	...	-0.25			
s. 31 22		7.92	...	-0.38			
s. 34 2		7.76	...	-0.48			
s. 34 53		7.48	...	-0.09			
s. 31 18		7.96	...	-0.48	7.42	Mounted circle C. 13 needle B. Swinging off Valparaiso.	}
s. 34 0		7.81	...	-0.48			
s. 32 30		7.58	...	-0.09			
s. 35 0		7.48	...	-0.09			
s. 32 2		7.70	7.69	-0.11	7.58	Mounted circle C. 13 needle B.	12.
s. 34 19		7.66					
N. & s. 51 2		7.67					
Grs. 2.0 50 57		7.63					
1.5 34 41		7.72					
1.0 22 14		7.85					
Def. s. 31 59		7.70					
s. 34 20		7.66					
N. & s. 50 41		7.76					
Grs. 2.0 49 28		7.79					
1.5 33 56		7.82	7.75	-0.11	7.64		13.
1.0 22 30		7.76					
Def. s. 31 35		7.83					
s. 33 35		7.94					
N. & s. 50 17		7.86					
Grs. 2.0 49 21		7.81					
1.5 33 34		7.89					
1.0 21 23		8.14					
Def. s. 30 58		8.05					
s. 33 24		7.96					
N. & s. 49 59		7.94	7.97	-0.22	7.75		15.
Grs. 2.0 48 13		7.94					
1.5 33 32		7.95					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1875. Dec. 16.	SOUTH. 32° 53'	WEST. 77° 2'	SOUTH. 40° 10'	-0° 18'	s.s.w.	+1° 11'	-39° 17'	+4° 22'	-0° 50'	SOUTH. 35° 45'
17.	33 42	78 19	41 51	-0 18	s.w. <sup>b</sup> w. <sub>2</sub> w.	+0 37	-41 32	+4 3	-0 50	38 19
18.	34 19	78 53	41 37	-0 18	w. <sup>b</sup> s.	+0 24	-41 31	+4 3	-0 50	38 18
19.	35 16	81 45	43 59	-0 19	s.w.	+0 45	-43 33	+3 46	-0 51	40 38
20.	36 19	83 53	46 13	-0 20	s.w. <sup>b</sup> s.	+0 55	-45 38	+3 28	-0 51	43 1
21.	37 10	83 6	45 29	-0 20	E.	+0 14	-45 35	+3 27	-0 51	42 59
22.	37 29	84 1	46 58	-0 20	s.w. <sup>b</sup> w.	+0 38	-46 40	+3 19	-0 52	44 13
23.	38 58	83 48	48 21	-0 21	s.s.w. <sub>2</sub> w.	+0 58	-47 44	+3 12	-0 52	45 24

Total Force (British Units ( $\phi$ )).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	31 2	8.03	8.05	- 0.14	7.91		1875.
s.	33 11	8.05					Dec. 16.
N. & s.	49 41	8.03					
Grs. 2.0	48 5	7.97					
1.5	32 44	8.16					
1.0	21 34	8.05					
Def. N.	30 47	8.10	8.17	- 0.25	7.92		17.
s.	33 40	8.05					
N. & s.	49 14	8.16					
Grs. 2.0	46 34	8.17					
1.0	20 47	8.36					
Def. N.	30 32	8.22	8.33	- 0.28	8.05		18.
s.	32 39	8.27					
N. & s.	49 0	8.24					
Grs. 2.0	45 41	8.33					
1.5	30 52	8.59					
1.0	20 55	8.31					
Def. N.	29 28	8.55	8.60	- 0.24	8.36		19.
s.	32 7	8.46					
N. & s.	47 47	8.57					
Grs. 2.0	43 19	8.65					
1.5	30 51	8.64					
1.0	19 52	8.74					
Def. N.	28 45	8.82	8.84	- 0.25	8.59		20.
s.	31 12	8.82					
N. & s.	47 1	8.82					
Grs. 2.0	42 27	8.80					
1.5	29 53	8.89					
1.0	19 28	8.90					
Def. N.	28 36	8.89	8.98	- 0.33	8.65		21.
s.	30 48	8.99					
N. & s.	46 22	9.00					
Grs. 2.0	41 9	9.03					
1.5	29 12	9.09					
1.0	19 27	8.90					
Def. N.	28 8	9.07	9.03	- 0.30	8.73		22.
s.	30 52	8.96					
N. & s.	46 22	9.00					
Grs. 2.0	40 34	9.15					
1.5	30 1	8.86					
1.0	19 0	9.12					
Def. N.	27 40	9.24	9.26	- 0.25	9.01		23.
s.	30 20	9.20					
N. & s.	45 54	9.16					
Grs. 2.0	39 45	9.30					
1.5	28 33	9.28					
1.0	18 24	9.41					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	R A.H.	$\frac{1}{d}$ .	Dip.
1875. Dec. 24.	SOUTH. 39° 44'	WEST. 86° 24'	SOUTH. 19° 32'	- 0° 22'	s.w.	+ 0° 43'	- 49° 11'	+ 3° 2'	- 0° 52'	SOUTH. 47° 1'
25.	40 32	89 20	51 10	- 0 23	s.w.	+ 0 42	- 50 51	+ 2 49	- 0 51	48 53
26.	41 2	87 59	50 35	- 0 23	E.	+ 0 13	- 50 45	+ 2 50	- 0 51	48 46
27.	42 18	84 33	50 2	- 0 23	E.	+ 0 13	- 50 12	+ 2 54	- 0 52	48 10
28.	42 44	82 15	49 53	- 0 23	E. <sup>h</sup> s.	+ 0 23	- 49 53	+ 2 59	- 0 52	47 46
29.	43 12	80 7	49 19	- 0 23	E.	+ 0 13	- 49 29	+ 3 5	- 0 52	47 16
30.	45 2	78 36	51 19	- 0 23	s.e. <sup>h</sup> s.	+ 0 54	- 50 48	+ 2 57	- 0 51	48 42
31.	45 42	76 20	50 43	- 0 23	E. <sup>h</sup> s.	+ 0 23	- 50 13	+ 2 58	- 0 51	48 36

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	27 6	9.48	9.49	- 0.32	9.17		1875.
S.	29 34	9.49					
N. & S.	44 54	9.49					
Grs. 2.0	38 45	9.50					Dec. 24.
1.5	27 9	9.71					
1.0	18 42	9.27					
Def. N.	26 16	9.78	9.78	- 0.35	9.43		25.
S.	28 39	9.89					
N. & S.	44 15	9.73					
Grs. 2.0	36 57	9.87					
1.5	27 29	9.61					
1.0	17 35	9.83					
Def. N.	26 12	9.83	9.81	- 0.39	9.42		26
S.	28 49	9.83					
N. & S.	44 8	9.79					
Grs. 2.0	37 22	9.83					
1.5	27 10	9.73					
1.0	17 37	9.83					
Def. N.	26 21	9.77	9.88	- 0.38	9.50		27.
S.	28 53	9.78					
N. & S.	44 15	9.73					
Grs. 2.0	37 0	9.89					
1.5	26 26	10.00					
1.0	17 9	10.08					
Def. N.	26 32	9.72	9.68	- 0.36	9.32		28.
S.	28 59	9.73					
N. & S.	44 31	9.59					
N.	26 55	9.58					
S.	29 27	9.54					
N. & S.	45 7	9.44	9.54	- 0.38	9.16		29.
Grs. 2.0	38 57	9.48					
1.5	27 23	9.65					
Def. N.	26 40	9.66					
S.	29 8	9.70					
N. & S.	44 39	9.56	9.75	- 0.31	9.44		30
Grs. 2.0	37 24	9.82					
1.5	27 3	9.79					
1.0	17 23	9.95					
Def. N.	27 8	9.49	9.51	- 0.37	9.14	Rolling heavily.	31.
S.	29 35	9.49					
N. & S.	44 44	9.55					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$	Dip.
1875. Dec. 31.	SOUTH. 46° 49'	WEST. 75° 20'	SOUTH. 48° 27'	- 0° 25'	...	...	...	...	...	SOUTH. 48° 52'
1876. Jan. 1.	47 54	74 42	52 15	- 0 24	S.E. $\frac{1}{2}$ S.	+ 0 49	- 51 50	+ 2 51	- 0 51	49 50
2.	48 19	74 33	52 8	- 0 24	S.E. $\frac{1}{2}$ S.	+ 0 49	- 51 43	+ 2 51	- 0 51	49 43
„	48 26	74 29	50 18	- 0 24	...	...	...	...	...	50 42
3.	48 55	74 20	49 52	- 0 24	...	...	...	...	...	50 16
5.	49 53	74 22	53 7	- 0 24	S. $\frac{1}{2}$ E.	+ 1 7	- 52 24	+ 2 49	- 0 51	50 26
9.	51 0	74 12	51 25	- 0 24	...	...	...	...	...	51 49
10.	52 10	73 36	52 41	- 0 24	...	...	...	...	...	53 5

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N. 27 27 s. 30 4 N. & s. 45 23 Grs. 2.5 52 13 2.0 38 40 1.5 28 30 1.0 18 5		...	...	...	9.393	Port Otway.	1875. Dec. 31.
Def. N. 26 14 s. 28 50 N. & s. 44 7		9.87 9.84 9.79	9.83	- 0.32	9.51	Off Fatal bay.	1876. Jan. 1.
N. 25 57 s. 28 26 N. & s. 13 43 Grs. 2.0 36 27 1.5 26 31		9.95 10.00 9.94 10.02 9.90					
...	...	...	...	...	...	Middle island.	"
Def. N. 26 38 s. 29 10 N. & s. 44 38		...	...	...	9.688	Gray's harbour.	3.
N. 25 27 s. 28 2 N. & s. 43 20 Grs. 2.0 35 10 1.0 16 36		10.16 10.17 10.06 10.35 10.39	10.23	- 0.29	9.94	Off Wilson island.	5.
...	...	...					
Def. N. 25 48 s. 28 24 N. & s. 43 52 Grs. 2.5 47 2 2.0 36 45 1.5 26 27 1.0 17 8		...	...	...	10.001	Puerto Bueno.	9.
Def. N. 25 43 s. 29 15 N. & s. 43 27 Grs. 2.5 47 10 2.0 35 58 1.5 26 32 1.0 16 33		...	...	...	9.985	Isthmus bay.	10.

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1876. Jan. 12.	SOUTH. 53° 1'	WEST. 74° 0'	SOUTH. 54° 25'	-0° 24'	...	...	...	...	...	SOUTH. 54° 49'
13.	53 54	71 20	54 43	-0 24	E. $\frac{1}{4}$ N.	+0 10	-54 57	+2 30	-0 51	53 17
17.	53 9	70 53	52 50	-0 14	...	...	...	...	...	53 4
21.	51 33	65 33	50 17	-0 29	N.E. $\frac{1}{2}$ E.	-0 36	-51 22	+2 56	-0 51	49 17
24.	51 41	57 51	47 35	-0 30	...	...	...	...	...	48 5
25.	"	"	46 51	-1 14	...	...	...	...	...	48 5

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$	Mean $\phi'$	Correction for Ship's Head.	Total Force.		
Def. N. S. N. & S.	24 37 27 11 42 18	...	...	...	10.535	Port Charruca.	1876. Jan. 12.
N. S. N. & S.	24 12 27 7 42 21	10.69 10.49 10.45	10.54	- 0.44	10.10	Off Cape Froward.	13.
N. S. N. & S.	25 47 28 21 43 38	...	...	...	10.104	Sandy Point.	17.
Grs. 2.5 2.0 1.5 1.0	47 14 36 35 26 1 17 11						
Def. N. S. N. & S.	26 10 28 45 44 13	9.86 9.86 9.74	9.83	- 0.49	9.34		21.
Grs. 2.0 1.5 1.0	37 5 27 5 17 36	9.90 9.80 9.83					
Def. N. S. N. & S.	28 22 30 47 46 32	...	...	...	9.016	Stanley, Falkland islands.	24.
Grs. 2.5 2.0 1.5 1.0	55 1 41 15 29 41 19 14						
Def. N. S. N. & S.	28 41 30 56 46 44	...	...	...	9.016	"Mounted circle" C. 13 needle B.	25.
Grs. 2.5 2.0 1.5 1.0	57 2 42 18 30 52 19 57						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1876. Feb. 4.	SOUTH. 51° 34'	WEST. 57° 52'	SOUTH. 48° 25' 48 44 49 32 50 24 50 34 50 45 50 3 49 19	- 0° 29' - 0 29 - 0 29 - 0 29 - 0 29 - 0 29 - 0 29 - 0 29	N. N.E. E. S.E. S. S.W. W. N.W. N. S.	- 1° 13' - 0 43 + 0 13 + 0 45 + 1 16 + 0 42 + 0 14 - 0 50	0 - 50 9	0 + 3 6	0 - 1 6	SOUTH. 0 48 9
7.	50 55	56 10	48 1	- 0 29	N.	- 1 13	- 49 43	+ 3 8	- 1 10	47 45
8.	48 47	55 39	48 17	- 0 29	S.W. <sup>b</sup> W. <sub>2</sub> W.	+ 0 32	- 48 14	+ 3 19	- 1 10	46 5
9.	48 18	56 10	45 7	- 0 29	N.N.W.	- 1 8	- 46 44	+ 3 31	- 1 10	44 23
10.	45 50	56 3	42 22	- 0 29	N.N.W.	- 1 7	- 43 58	+ 3 55	- 1 9	41 12
12.	41 40	54 52	38 28	- 0 29	N. <sup>b</sup> E.	- 1 4	- 40 1	+ 4 28	- 1 7	36 40
13.	39 21	54 20	36 9	- 0 29	N.	- 1 8	- 36 46	+ 4 55	- 1 3	32 54
14.	37 2	53 57	34 2	- 0 30	N.N.W.	- 1 3	- 35 35	+ 5 7	- 1 1	31 29

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.				
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.						
Def. N.	27 13	9.48	...	- 0.58	8.95	Mounted circle C. 13 needle A. Swinging in Berkeley sound.	1876. Feb. 4.				
N.	27 31	9.34	...	- 0.50							
N.	27 33	9.33	...	- 0.38							
N.	27 50	9.22	...	- 0.32							
N.	27 29	9.36	...	- 0.25							
N.	27 28	9.36	...	- 0.33							
N.	27 35	9.32	...	- 0.38							
N.	27 30	9.35	...	- 0.44							
S.	29 40	9.48	...	- 0.58							
S.	30 6	9.39	...	- 0.25							
N.	27 47	9.23	9.31	- 0.58	8.73	Lurching heavily.	7. 8. 9. 10. 12. 13. 14.				
S.	29 48	9.43									
N. & S.	45 56	9.19									
Gr. 2.0	39 52	9.32									
1.5	28 24	9.38	...	...	...						
...	...	...	...	...	...						
Def. N.	28 42	8.87	8.86	- 0.56	8.30						
S.	31 20	8.83									
N. & S.	46 56	8.88									
Gr. 2.0	42 20	8.86									
1.5	30 10	8.87	8.86								
1.0	19 35	8.86									
Def. N.	29 40	8.54	8.61	- 0.54	8.07						
S.	32 7	8.52									
N. & S.	48 28	8.41									
Gr. 2.0	42 26	8.85									
1.0	19 53	8.73	7.78	- 0.53	7.25						
Def. N.	31 51	7.82									
S.	34 4	7.81									
N. & S.	51 8	7.70									
N.	32 43	7.53	7.65	- 0.52	7.13						
S.	35 30	7.35									
N. & S.	51 20	7.64									
Gr. 2.0	50 27	7.75									
1.5	35 5	7.76	7.27	- 0.49	6.78						
1.0	23 10	7.56									
Def. N.	33 36	7.27									
S.	35 50	7.26									
N. & S.	52 41	7.24	7.27								
Gr. 2.0	54 31	7.34									
1.5	37 55	7.25									
1.0	24 9	7.26									

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N	R A.H.	$\frac{1}{d}$ .	Dip.
1876. Feb. 21.	SOUTH. 34° 54'	WEST. 56° 14'	SOUTH. 29° 23'	- 0° 26'	...	...	...	...	...	SOUTH. 29° 49'
25.	35 0	55 55	32 58	- 0 31	E. $^h$ N.	- 0 2	- 33 31	+ 5 25	- 0 58	29 4
26.	35 22	53 35	33 28	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 33 43	+ 5 23	- 0 59	29 19
27.	35 25	52 35	34 11	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 34 26	+ 5 20	- 1 0	30 6
Mar. 1.	36 2	47 46	34 5	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 34 16	+ 5 21	- 0 57	29 52
2.	36 44	46 14	34 9	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 34 24	+ 5 23	- 0 57	29 58
4.	36 56	42 54	33 18	- 0 31	N.E.	- 0 40	- 34 29	+ 5 23	- 0 57	30 3
5.	37 33	41 47	35 31	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 35 46	+ 5 16	- 0 57	31 27

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Detectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	34 59	...	...	...	6.700	Monte Video.	1876. Feb. 21.
s.	37 28						
n. & s.	54 57						
Grs. 2.0	61 51						
1.5	41 20						
1.0	26 23						
Def. n.	34 15	7.08	7.03	- 0.29	6.74		25.
s.	36 41	7.01					
n. & s.	53 37	7.06					
Grs. 2.0	57 54	7.05					
1.5	40 10	6.91					
1.0	24 42	7.09					
Def. n.	34 30	7.00	6.87	- 0.23	6.64		26.
s.	36 49	6.96					
n. & s.	54 18	6.89					
Grs. 1.5	40 29	6.88					
1.0	26 35	6.62					
Def. n.	34 23	7.02	6.93	- 0.24	6.69		27.
s.	36 31	7.00					
n. & s.	54 6	6.94					
Grs. 2.0	59 17	6.95					
1.5	41 3	6.81					
1.0	25 44	6.83					
Def. n.	35 0	6.81	6.70	- 0.23	6.47		Mar. 1.
s.	37 27	6.72					
n. & s.	55 11	6.68					
Grs. 1.5	41 36	6.71					
1.0	26 48	6.56					
Def. n.	35 2	6.80	6.76	- 0.23	6.53		2.
s.	37 20	6.70					
n. & s.	55 8	6.70					
Grs. 2.0	60 52	6.84					
1.5	40 40	6.84					
1.0	26 26	6.65					
Def. n.	34 23	6.98	6.84	- 0.41	6.43		4.
s.	36 52	6.80					
n. & s.	54 38	6.81					
Grs. 2.0	59 49	6.91					
1.5	39 45	6.97					
1.0	26 33	6.60					
Def. n.	35 16	6.69	6.67	- 0.24	6.43		5.
s.	37 14	6.70					
n. & s.	55 7	6.70					
Grs. 1.5	41 48	6.67					
1.0	26 3	6.68					

Date.	Geographical Position.				Inclination or Dip ( $\theta$ ).					
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{\bar{A}}$ .	Dip.
1876.	SOUTH.	WEST.	SOUTH.							SOUTH.
Mar. 6.	37° 38'	39° 46'	35° 39'	- 0° 31'	E. $\frac{1}{2}$ S.	+ 0° 16'	- 35° 54'	+ 5° 17'	- 0° 57'	31° 34'
7.	37 31	36 22	36 26	- 0 31	E. $\frac{1}{2}$ S.	+ 0 16	- 36 41	+ 5 15	- 0 57	32 23
8.	37 44	33 24	38 9	- 0 31	E. $\frac{1}{2}$ S.	+ 0 22	- 38 18	+ 5 5	- 0 57	34 8
9.	37 38	30 39	38 18	- 0 31	E.	+ 0 12	- 38 38	+ 5 4	- 0 49	34 23
11.	36 26	26 6	37 33	- 0 31	N.E. $\frac{1}{2}$ E.	- 0 21	- 38 25	+ 5 8	- 0 48	34 5
12.	35 53	24 18	38 36	- 0 31	E.	+ 0 12	- 38 55	+ 5 7	- 0 49	34 37
13.	35 37	21 2	41 27	- 0 31	E.S.E.	+ 0 33	- 41 25	+ 4 49	- 0 50	37 26
14.	35 35	18 14	41 17	- 0 31	E.N.E.	- 0 14	- 42 2	+ 4 43	- 0 50	38 9
15.	34 15	15 57	41 45	- 0 31	E.N.E.	- 0 14	- 41 58	+ 4 41	- 0 50	38 7

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	35° 23'	6.65	6.63	- 0.25	6.38		1876.
s.	37 40	6.63					Mar. 6.
N. & s.	56 28	6.61					
s.	35 30	6.61	6.58	- 0.24	6.34		7.
s.	37 52	6.59					
N. & s.	55 43	6.56					
Gr. 2.0	64 25	6.62					
1.5	43 35	6.41					
1.0	26 7	6.66					
Def. n.	36 14	6.40	6.54	- 0.25	6.29		8.
s.	38 15	6.46					
N. & s.	55 28	6.61					
Gr. 1.5	41 28	6.68	6.45	- 0.29	6.16		9.
Def. n.	36 12	6.48					
s.	38 12	6.47					
N. & s.	55 48	6.54					
Gr. 1.5	43 43	6.38					
1.0	26 50	6.48					
Def. n.	35 26	6.57	6.69	- 0.36	6.33		11.
s.	37 33	6.65					
N. & s.	55 35	6.58					
Gr. 2.0	60 22	6.87					
1.5	41 43	6.66					
1.0	26 5	6.63					
Def. n.	36 14	6.37	6.48	- 0.29	6.19		12.
s.	38 48	6.32					
N. & s.	55 56	6.52					
Gr. 2.0	63 20	6.68					
1.5	43 13	6.45					
1.0	26 38	6.52					
Def. n.	36 26	6.30	6.39	- 0.25	6.14		13.
s.	38 30	6.39					
N. & s.	56 4	6.48					
Gr. 2.0	67 10	6.48					
1.5	43 54	6.35					
1.0	27 11	6.36					
...	...	...	...	...	...		14.
Def. n.	35 42	6.15	6.56	- 0.39	6.17		15.
s.	38 20	6.41					
N. & s.	55 30	6.61					
Gr. 2.0	63 12	6.69					
1.5	42 14	6.57					
1.0	26 2	6.62					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1876. Mar. 16.	SOUTH. 32° 20'	WEST. 13° 5'	SOUTH. 39° 52'	- 0° 31'	N. <sup>b</sup> E. $\frac{1}{2}$ E.	- 1° 1'	- 41° 24'	+ 4° 47'	- 0° 50'	SOUTH. 37° 27'
17.	30 37	13 12 <sup>a</sup>	38 28	- 0 31	N. <sup>b</sup> E. $\frac{1}{2}$ E.	- 1 0	- 39 59	+ 4 56	- 0 50	35 53
„	30 49	13 13	38 39	- 0 31	N.N.E.	- 0 59	- 40 9	+ 4 55	- 0 50	36 4
18	27 13	13 16	36 27	- 0 31	N.N.E.	- 0 58	- 37 56	+ 5 7	- 0 48	33 37
19	25 5	13 33	34 34	- 0 31	N.N.E.	- 0 58	- 36 3	+ 5 19	- 0 46	31 30
20.	23 29	13 49	31 48	- 0 31	N.N.E.	- 0 57	- 33 16	+ 5 32	- 0 43	28 27
22.	20 10	13 58	28 53	- 0 31	N.E. <sup>b</sup> N.	- 0 47	- 30 11	+ 5 49	- 0 39	25 1
„	19 30	13 56	27 39	- 0 31	N.N.E.	- 0 56	- 29 6	+ 5 51	- 0 38	23 50

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Detectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	35° 5'	6.66	6.66	- 0.54	6.12		1876.
s.	37 20	6.67					Mar. 16.
N. & s.	55 0	6.72					
Grs. 2.0	63 9	6.69					
1.5	42 13	6.57					
1.0	25 41	6.68					
Def. N.	35 18	6.60	6.59	- 0.53	6.06		17.
s.	38 14	6.45					
N. & s.	55 28	6.61					
Grs. 2.0	62 32	6.73					
1.5	42 53	6.47					
1.0	25 53	6.66					
Def. N.	35 24	6.55	6.54	- 0.53	6.01		"
s.	37 49	6.55					
N. & s.	55 17	6.65					
Grs. 1.0	26 43	6.42					
Def. N.	36 13	6.37	6.39	- 0.52	5.87		18.
s.	38 24	6.39					
N. & s.	56 0	6.50					
Grs. 1.5	44 27	6.28					
1.0	26 42	6.42					
Def. N.	35 50	6.42	6.38	- 0.51	5.87		19.
s.	38 22	6.39					
N. & s.	55 51	6.53					
Grs. 1.5	43 32	6.39					
1.0	27 56	6.16					
Def. N.	36 0	6.39	6.44	- 0.50	5.94		20.
s.	38 15	6.40					
N. & s.	56 18	6.44					
Grs. 2.0	66 7	6.53					
1.5	42 30	6.50					
1.0	26 38	6.41					
Def. N.	35 59	6.39	6.33	- 0.43	5.90		22.
s.	38 30	6.34					
N. & s.	56 19	6.44					
Grs. 1.5	44 22	6.29					
1.0	27 37	6.18					
Def. N.	35 58	6.39	6.42	- 0.47	5.95		"
s.	38 13	6.40					
N. & s.	56 15	6.45					
Grs. 2.0	66 15	6.52					
1.5	41 57	6.56					
1.0	27 27	6.20					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{\Delta H}$ .	$\frac{1}{d}$ .	Dip.
1876. Mar. 23.	SOUTH. 17° 51'	WEST. 13° 53'	SOUTH. 26° 35'	- 0° 31'	N.E. <sup>b</sup> N.	- 0° 47'	- 27° 53'	+ 5° 52'	- 0° 36'	22° 37'
„	17 3	13 51	25 8	- 0 31	N.E. <sup>b</sup> N.	- 0 47	- 26 26	+ 6 1	- 0 34	20 59
24.	15 30	13 44	22 59	- 0 31	N.E. <sup>b</sup> N.	- 0 46	- 24 16	+ 6 10	- 0 31	18 37
„	14 32	13 42	21 42	- 0 31	N.E. <sup>b</sup> N. $\frac{1}{2}$ N.	- 0 50	- 23 3	+ 6 17	- 0 29	17 15
25.	13 2	13 43	20 27	- 0 31	N.E. <sup>b</sup> N. $\frac{1}{2}$ N.	- 0 50	- 21 48	+ 6 19	- 0 27	15 56
„	12 12	13 44	19 45	- 0 31	N.E. <sup>b</sup> N. $\frac{1}{2}$ N.	- 0 50	- 21 5	+ 6 15	- 0 27	15 18
26.	10 42	13 44	17 41	- 0 31	N.E. <sup>b</sup> N. $\frac{1}{2}$ N.	- 0 49	- 19 1	+ 6 21	- 0 23	13 3
27.	8 33	13 57	13 25	- 0 31	N. <sup>b</sup> E.	- 0 54	- 14 50	+ 6 35	- 0 15	8 30
April 1.	7 56	14 21	7 21	- 0 35	...	...	...	...	...	7 56

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	36° 6'	6.38	6.30	- 0.42	5.88		1876.
S.	38 21	6.39					
N. & S.	56 35	6.36					Mar. 23.
Grns. 1.5	41 38	6.23					
1.0	27 36	6.16					
Def. N.	35 45	6.44	6.38	- 0.41	5.97	"	
S.	38 27	6.34					
N. & S.	56 34	6.36					
Grns. 1.5	42 38	6.17					
1.0	27 0	6.28					
Def. N.	36 9	6.34	6.33	- 0.40	5.93		24.
S.	38 30	6.34					
N. & S.	56 18	6.44					
Grns. 1.5	43 49	6.34					
1.0	27 33	6.17					
Def. N.	36 13	6.28	6.32	- 0.41	5.91	"	
S.	38 26	6.33					
N. & S.	55 43	6.56					
Grns. 1.0	27 41	6.12					
Def. N.	36 1	6.32	6.38	- 0.41	5.97		25.
S.	38 25	6.33					
N. & S.	56 4	6.48					
Grns. 1.5	43 6	6.41					
Def. N.	35 56	6.34	6.40	- 0.41	5.99	"	
S.	38 12	6.40					
N. & S.	56 16	6.45					
Grns. 1.5	42 32	6.48					
1.0	26 52	6.32					
Def. N.	35 51	6.37	6.41	- 0.40	6.01		26.
S.	38 18	6.37					
N. & S.	55 54	6.52					
Grns. 1.5	42 10	6.52					
1.0	27 4	6.26					
Def. N.	35 16	6.50	6.45	- 0.40	6.05		27.
S.	37 59	6.46					
N. & S.	55 33	6.60					
Grns. 1.5	42 48	6.43					
1.0	26 46	6.24					
Def. N.	36 40	...	...	...	6.133	Ascension island.	April 1.
S.	39 9						
N. & S.	57 37						
Grns. 1.5	45 30						
1.0	27 42						

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1876. April 3.	SOUTH. 7° 54'	WEST. 14° 26'	SOUTH. 12° 28' 12 20 13 14 14 21 14 55 14 2 13 33 13 22	- 0° 31' - 0 31 - 0 31 - 0 31 - 0 31 - 0 31 - 0 31 - 0 31	N. N.E. E. S.E. S. S.W. W. N.W.	- 0 57 - 0 37 + 0 8 + 0 51 + 1 3 + 0 43 + 0 8 - 0 37	- 13 58	+ 6 38	- 0 13	SOUTH. 7 33
4.	6 30	14 26	10 13	- 0 30	N.N.E. $\frac{1}{2}$ E.	- 0 42	- 11 25	+ 6 30	- 0 9	5 4
5.	4 41	14 32	7 6	- 0 27	N.N.E. $\frac{1}{2}$ E.	- 0 31	- 8 7	+ 6 32	- 0 3	1 38
„	3 47	14 36	5 14	- 0 25	N.E. <sup>b</sup> N.	- 0 28	- 6 7	+ 6 31	+ 0 1	NORTH. 0 25
6.	2 16	14 38	2 49	- 0 22	N.E. <sup>b</sup> N.	- 0 22	- 3 33	+ 6 28	+ 0 5	3 0
7.	1 17	14 33	1 9	- 0 21	N.E. <sup>b</sup> N.	- 0 19	- 1 49	+ 6 25	+ 0 8	4 44
„	0 22	14 26	NORTH. 0 4	- 0 20	N.E. <sup>b</sup> N.	- 0 16	- 0 32	+ 6 20	+ 0 10	5 58
8.	NORTH. 1 17	14 8	2 39	- 0 18	N.E. <sup>b</sup> N.	- 0 11	+ 2 10	+ 6 18	+ 0 15	8 43

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
							1876.
Def. N.	35 0	6.56	...	- 0.12	6.10	Swinging off Ascension island.	April 3.
N.	35 36	6.40	...	- 0.29			
N.	36 31	6.17	...	- 0.08			
N.	37 5	6.01	...	+ 0.11			
N.	37 5	6.01	...	+ 0.14			
N.	37 6	6.01	...	+ 0.06			
N.	36 33	6.16	...	- 0.08			
N.	35 48	6.35	...	- 0.31			
S.	37 31	6.55	...	- 0.12			
S.	39 41	6.01	...	+ 0.14			
N.	35 2	6.59	6.57	- 0.33	6.21		4.
S.	37 38	6.54					
N. & S.	55 10	6.66					
Grs. 1.5	42 0	6.54					
1.0	25 57	6.51					
Def. N.	34 49	6.66	6.56	- 0.28	6.28		5.
S.	37 20	6.62					
N. & S.	54 56	6.72					
Grs. 1.5	42 45	6.45					
1.0	26 40	6.35					
Def. N.	34 43	6.70	6.59	- 0.22	6.37		"
S.	37 14	6.63					
N. & S.	55 7	6.68					
Grs. 1.5	42 50	6.44					
1.0	25 59	6.50					
...	...	...	...	...	...		6.
Def. N.	34 23	6.76	6.74	- 0.16	6.58		7.
S.	36 43	6.79					
N. & S.	54 11	6.88					
Grs. 1.5	40 42	6.71					
1.0	25 48	6.51					
Def. N.	34 5	6.85	6.83	- 0.14	6.69		"
S.	36 34	6.83					
N. & S.	54 3	6.89					
Grs. 1.5	40 16	6.77					
1.0	24 49	6.80					
Def. N.	34 8	6.85	6.93	- 0.10	6.83		8.
S.	36 21	6.90					
N. & S.	53 29	7.02					
Grs. 1.5	38 43	6.99					
1.0	24 31	6.87					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{H.}$	Dip.
1876. April 8.	NORTH. $1^{\circ} 58'$	WEST. $14^{\circ} 16'$	NORTH. $4^{\circ} 32'$	$-0^{\circ} 15'$	N. $\frac{1}{4}$ W.	$-0^{\circ} 6'$	$+4^{\circ} 11'$	$+6^{\circ} 15'$	$+0^{\circ} 19'$	NORTH. $10^{\circ} 45'$
9.	3 27	14 51	7 22	$-0^{\circ} 12'$	N.N.E.	$+0^{\circ} 4'$	$+7^{\circ} 14'$	$+6^{\circ} 7'$	$+0^{\circ} 24'$	13 45
10.	4 50	14 47	9 44	$-0^{\circ} 10'$	N.N.E.	$+0^{\circ} 8'$	$+9^{\circ} 42'$	$+6^{\circ} 0'$	$+0^{\circ} 28'$	16 10
„	5 32	14 48	11 17	$-0^{\circ} 9'$	N.	$+0^{\circ} 14'$	$+11^{\circ} 22'$	$+5^{\circ} 55'$	$+0^{\circ} 30'$	17 47
11.	7 0	15 4	14 5	$-0^{\circ} 6'$	N.	$+0^{\circ} 23'$	$+14^{\circ} 22'$	$+5^{\circ} 45'$	$+0^{\circ} 34'$	20 41
„	7 38	15 21	15 5	$-0^{\circ} 5'$	N.N.W.	$+0^{\circ} 24'$	$+15^{\circ} 24'$	$+5^{\circ} 40'$	$+0^{\circ} 35'$	21 39
12.	8 42	16 17	17 40	$-0^{\circ} 3'$	N.N.W.	$+0^{\circ} 31'$	$+18^{\circ} 11'$	$+5^{\circ} 29'$	$+0^{\circ} 38'$	24 18
„	9 15	16 47	19 49	$-0^{\circ} 2'$	N.N.W.	$+0^{\circ} 37'$	$+20^{\circ} 24'$	$+5^{\circ} 20'$	$+0^{\circ} 41'$	26 25
13.	10 23	17 42	22 1	$+0^{\circ} 1'$	N.N.W.	$+0^{\circ} 43'$	$+22^{\circ} 45'$	$+5^{\circ} 8'$	$+0^{\circ} 43'$	28 36

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	33 33	7.04	7.01	- 0.15	6.86		1876.
S.	36 3	6.99					April 8.
N. & S.	52 54	7.13					
Grns. 1.5	38 55	6.96					
1.0	24 16	6.94					
Def. N.	33 16	7.10	6.98	- 0.08	6.90		9.
S.	36 4	6.99					
N. & S.	53 7	7.08					
Grns. 1.5	39 3	6.94					
1.0	24 46	6.81					
Def. N.	33 7	7.14	7.06	- 0.03	7.03		10.
S.	35 40	7.10					
N. & S.	52 50	7.11					
Grns. 1.5	38 38	7.01					
1.0	24 20	6.92					
Def. N.	32 50	7.25	7.22	- 0.04	7.18		"
S.	35 31	7.15					
N. & S.	52 20	7.25					
Grns. 1.5	37 20	7.22					
1.0	23 15	7.23					
Def. N.	32 41	7.30	7.30	0.00	7.30		11.
S.	35 8	7.23					
N. & S.	52 8	7.29					
Grns. 1.5	36 59	7.28					
1.0	22 42	7.39					
Def. N.	32 33	7.38	7.28	+ 0.02	7.30		"
S.	35 17	7.21					
N. & S.	51 53	7.34					
Grns. 1.5	37 14	7.25					
1.0	23 14	7.24					
Def. N.	32 5	7.51	7.42	+ 0.07	7.49		12.
S.	34 43	7.40					
N. & S.	51 20	7.48					
Grns. 1.5	36 21	7.39					
1.0	22 52	7.34					
Def. N.	32 6	7.52	7.42	+ 0.10	7.52		"
S.	35 2	7.30					
N. & S.	51 26	7.44					
Grns. 1.5	36 12	7.42					
1.0	22 36	7.42					
Def. N.	31 57	7.58	7.51	+ 0.13	7.64		13.
S.	34 31	7.47					
N. & S.	51 3	7.53					
Grns. 1.5	36 0	7.45					
1.0	22 14	7.53					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d}$ .	Dip.
1876. April 13.	NORTH. $10^{\circ} 58'$	WEST. $17^{\circ} 50'$	NORTH. $22^{\circ} 48'$	$+0^{\circ} 2'$	N.W. $\frac{1}{4}$ N.	$+0^{\circ} 33'$	$+23^{\circ} 23'$	$+5^{\circ} 5'$	$+0^{\circ} 43'$	NORTH. $29^{\circ} 11'$
14.	11 16	18 11	23 56	$+0^{\circ} 3$	N.W.	$+0^{\circ} 27$	$+24^{\circ} 26$	$+5^{\circ} 0$	$+0^{\circ} 44$	30 10
„	11 38	19 4	25 7	$+0^{\circ} 5$	N.W. $\frac{1}{2}$ N.	$+0^{\circ} 41$	$+25^{\circ} 53$	$+4^{\circ} 53$	$+0^{\circ} 46$	31 32
15.	11 56	20 57	26 53	$+0^{\circ} 6$	N.W. $\frac{1}{2}$ N.	$+0^{\circ} 44$	$+27^{\circ} 43$	$+4^{\circ} 45$	$+0^{\circ} 47$	33 15
„	12 32	21 29	27 30	$+0^{\circ} 7$	N. $\frac{3}{4}$ W.	$+1^{\circ} 7$	$+28^{\circ} 44$	$+4^{\circ} 39$	$+0^{\circ} 48$	34 11
16.	13 35	22 43	30 7	$+0^{\circ} 9$	N.N.W. $\frac{1}{2}$ W.	$+0^{\circ} 59$	$+31^{\circ} 15$	$+4^{\circ} 28$	$+0^{\circ} 50$	36 33
„	14 22	23 37	32 14	$+0^{\circ} 11$	N. $\frac{1}{2}$ W.	$+1^{\circ} 16$	$+33^{\circ} 41$	$+4^{\circ} 16$	$+0^{\circ} 51$	38 48
19.	16 54	25 5	36 29 37 38 39 5 39 39 39 10 38 27 37 34 37 11	$+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$ $+0^{\circ} 11$	N. N.E. E. S.E. S. S.W. W. N.W. N. S.	$+1^{\circ} 32$ $+0^{\circ} 53$ $-0^{\circ} 27$ $-1^{\circ} 23$ $-1^{\circ} 37$ $-1^{\circ} 19$ $-0^{\circ} 27$ $+0^{\circ} 50$	$+38^{\circ} 1$	$+3^{\circ} 55$	$+0^{\circ} 51$	42 52

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	32 14	7.44	7.45	+ 0.26	7.71		1876.
S.	34 56	7.35					April 13.
N. & S.	51 35	7.42					
Grs. 1.5	35 27	7.58					
1.0	22 30	7.45					
Def. N.	32 6	7.53	7.38	+ 0.28	7.66		14.
S.	34 53	7.37					
N. & S.	51 49	7.41					
Grs. 1.0	23 21	7.20					
Def. N.	31 53	7.59	7.47	+ 0.23	7.70		"
S.	34 25	7.52					
N. & S.	51 2	7.53					
Grs. 1.5	37 23	7.23					
Def. N.	31 39	7.68	7.62	+ 0.26	7.88		15.
S.	34 23	7.52					
N. & S.	50 33	7.66					
Grs. 1.0	21 58	7.61					
Def. N.	31 20	7.76	7.71	+ 0.22	7.93		"
S.	33 50	7.72					
N. & S.	49 59	7.79					
Grs. 1.5	34 13	7.80					
1.0	22 24	7.49					
Def. N.	30 57	7.87	7.82	+ 0.28	8.10		16.
S.	33 34	7.78					
N. & S.	49 38	7.86					
Grs. 1.5	34 8	7.82					
1.0	21 35	7.75					
Def. N.	30 53	7.89	7.93	+ 0.29	8.22		"
S.	33 22	7.88					
N. & S.	49 20	7.94					
Grs. 2.0	47 52	8.00					
1.5	33 12	8.03					
1.0	21 17	7.86					
Def. N.	29 42	8.29	...	+ 0.37	8.54	Swinging off St Vincent, Cape de Verde islands.	19.
N.	30 22	8.08	...	+ 0.47			
N.	30 52	7.91	...	+ 0.68			
N.	31 26	7.75	...	+ 0.79			
N.	31 49	7.64	...	+ 0.82			
N.	31 39	7.70	...	+ 0.78			
N.	30 55	7.90	...	+ 0.68			
N.	30 22	8.07	...	+ 0.48			
S.	32 24	8.21	...	+ 0.37			
S.	34 38	7.46	...	+ 0.82			

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{d.}$ .	Dip.
1876. April 22.	NORTH. 16° 53'	WEST. 25° 1'	NORTH. 42° 55'	+ 0° 11'	...	...	...	...	...	NORTH. 43° 6'
"	"	"	43 7	- 0 1	...	...	...	...	...	43 6
24.	"	"	42 27	+ 0 39	...	...	...	...	...	43 6
27.	17 21	26 42	38 54	+ 0 11	N. w. <sup>b</sup> w.	+ 0 32	+ 39 37	+ 3 47	+ 0 52	44 16
28.	17 53	28 44	40 45	+ 0 11	N. w.	+ 0 52	+ 41 48	+ 3 33	+ 0 52	46 13
29.	18 4	30 2	41 13	+ 0 11	N. <sup>b</sup> w. $\frac{1}{2}$ w.	+ 1 28	+ 42 52	+ 3 32	+ 0 52	47 16

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors, or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. n.	28 52	...	...	...	8.577	St Vincent. Cape de Verde islands.	1876. } April 22.
s.	31 25						
N. & s.	47 6						
Gr. 2.5	58 13						
2.0	42 44						
1.5	30 46						
1.0	19 26						
Def. n.	28 46	...	...	...	8.577	Mounted circle C. 13 needle B.	"
s.	30 53						
N. & s.	46 41						
Gr. 2.5	57 32						
2.0	42 20						
1.5	30 27						
1.0	19 13						
Def. n.	40 40	...	...	...	8.577	Mounted circle I. 27 needle A.	24.
s.	48 19						
N. & s.	66 31						
Gr. 2.5	71 41						
2.0	50 40						
1.5	35 52						
1.0	24 50						
Def. n.	30 40	7.98	8.11	+ 0.52	8.63	Mounted circle C. 13 needle A.	27.
s.	32 50	8.06					
N. & s.	49 5	8.01					
Gr. 2.5	63 55	8.12					
2.0	46 0	8.24					
1.5	32 32	8.17					
1.0	20 22	8.21					
Def. n.	30 0	8.19	8.18	+ 0.53	8.71		28.
s.	32 0	8.33					
N. & s.	48 23	8.20					
Gr. 2.5	63 20	8.16					
2.0	46 27	8.18					
1.5	33 5	8.02					
1.0	21 0	7.98					
Def. n.	29 28	8.36	8.46	+ 0.55	9.01		29.
s.	31 36	8.46					
N. & s.	47 28	8.50					
Gr. 2.0	44 15	8.48					
1.5	31 12	8.48					

Date.	Geographical Position.		Inclination or Dip. ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A'H.}$	$\frac{1}{d.}$	Dip.
1876. April 30.	NORTH. 19° 59'	WEST. 30° 34'	NORTH. 43° 35'	+ 0° 11'	N.N.E.	+ 1° 24'	+ 45° 10'	+ 3° 20'	+ 0° 51'	NORTH. 49° 21'
May 1.	21 32	31 14	45 24	+ 0 10	N. $\frac{1}{2}$ W.	+ 1 33	+ 47 7	+ 3 11	+ 0 51	51 9
„	22 8	31 29	46 22	+ 0 10	N. $\frac{1}{2}$ W.	+ 1 34	+ 48 6	+ 3 6	+ 0 51	52 3
2.	23 13	32 22	47 49	+ 0 10	N. $\frac{1}{2}$ E.	+ 1 33	+ 49 32	+ 2 58	+ 0 50	53 20
„	24 5	32 39	49 1	+ 0 9	N.	+ 1 37	+ 50 47	+ 2 51	+ 0 49	54 27
3.	25 40	33 29	51 3	+ 0 8	N. $\frac{1}{2}$ E.	+ 1 32	+ 52 43	+ 2 41	+ 0 48	56 12
4.	27 30	34 39	52 59	+ 0 7	N. $\frac{1}{2}$ W.	+ 1 34	+ 54 40	+ 2 30	+ 0 47	57 57

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	28 25	8.75	8.69	+ 0.50	9.19		1876.
S.	31 2	8.70					
N. & S.	46 15	8.89					
Grs. 2.5	58 32	8.58					April 30.
2.0	43 9	8.66					
1.5	30 50	8.58					
Def. N.	27 49	8.95	8.87	+ 0.50	9.37		May 1.
S.	30 21	8.96					
N. & S.	45 38	9.14					
Grs. 2.5	55 41	8.85					
2.0	41 22	8.98					
1.5	30 47	8.59					
1.0	19 20	8.63					
Def. N.	28 11	8.81	8.94	+ 0.52	9.46		"
S.	30 11	9.02					
N. & S.	46 1	8.99					
N.	27 26	9.11	9.11	+ 0.55	9.66		2.
S.	29 52	9.15					
N. & S.	45 43	9.12					
Grs. 2.5	53 46	9.09					
2.0	39 50	9.26					
1.5	29 10	9.02					
1.0	18 28	9.03					
Def. S.	29 51	9.15	9.08	+ 0.57	9.65		"
N. & S.	45 14	9.29					
Grs. 2.5	53 0	9.19					
2.0	40 47	9.09					
1.5	29 51	8.87					
1.0	18 55	8.86					
Def. N.	26 48	9.34	9.37	+ 0.61	9.98		3.
S.	29 25	9.38					
N. & S.	44 51	9.44					
Grs. 2.5	52 24	9.27					
2.0	38 56	9.44					
1.5	28 30	9.23					
1.0	17 45	9.48					
Def. N.	26 17	9.53	9.48	+ 0.63	10.11		4.
S.	28 52	9.58					
N. & S.	44 28	9.58					
Grs. 2.5	51 50	9.35					
2.0	38 10	9.59					
1.5	28 21	9.26					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1876. May 4.	NORTH. 28° 26'	WEST. 35° 2'	NORTH. 53° 54'	+0° 7'	N. $\frac{1}{4}$ W.	+1° 38'	+55° 39'	+2° 27'	+0° 46'	NORTH. 58° 52'
5.	29 36	35 57	55 8	+0 6	N. $\frac{1}{4}$ W.	+1 39	+56 53	+2 21	+0 45	59 59
„	30 30	36 9	56 12	+0 6	N.N.E.	+1 29	+57 47	+2 19	+0 45	60 51
6.	31 57	36 8	57 37	+0 5	N.N.E.	+1 30	+59 12	+2 10	+0 43	62 5
7.	34 10	34 33	59 46	+0 4	N.E. $\frac{1}{2}$ E.	+0 53	+60 43	+2 2	+0 42	63 27
„	34 38	34 3	60 19	+0 4	E. $\frac{1}{2}$ N. $\frac{1}{2}$ N.	+0 13	+60 36	+2 5	+0 42	63 23
8.	35 24	33 22	59 8	+0 4	N.N.E.	+1 30	+60 42	+2 6	+0 42	63 30
„	36 20	33 28	59 57	+0 4	N. $\frac{1}{2}$ E.	+1 36	+60 37	+2 11	+0 42	63 30

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	26° 5'	9.60	9.59	+ 0.65	10.24		1876.
S.	28 21	9.84					
N. & S.	44 8	9.72					
Grs. 2.5	49 6	9.73					May 4.
2.0	37 50	9.67					
1.5	28 24	9.25	9.77	+ 0.66	10.43		
1.0	18 2	9.31					
Def. N.	25 37	9.80					
S.	28 26	9.81					5.
N. & S.	43 36	9.94					
Grs. 2.5	48 51	9.79	9.78	+ 0.71	10.49		
2.0	37 17	9.79					
1.5	27 10	9.74					
1.0	17 44	9.50					
Def. N.	25 44	9.74	9.90	+ 0.72	10.62		
S.	28 30	9.76					
N. & S.	43 32	9.97					
Grs. 2.5	49 16	9.73					
2.0	37 22	9.78					
1.5	27 5	9.76	9.97	+ 0.80	10.77		
1.0	17 15	9.73					
Def. N.	25 45	9.74					
S.	28 0	9.99					
N. & S.	43 22	10.05					
Grs. 2.5	48 28	9.86	9.97	+ 0.85	10.62		6.
2.0	36 4	10.06					
1.5	26 42	9.94					
1.0	17 21	9.60					
Def. N.	25 17	9.90					
S.	27 53	10.02	10.00	+ 0.75	10.75		
N. & S.	43 44	9.98					
N.	25 45	9.76					
S.	28 12	9.86					
N. & S.	43 47	9.95					
Grs. 2.5	49 40	9.70	10.08	+ 0.73	10.81		
2.0	37 20	9.78					
1.5	27 45	9.57					
Def. N.	25 31	9.86					
S.	27 55	9.98					
N. & S.	43 20	10.08	10.08	+ 0.73	10.81		
Grs. 2.5	47 26	10.00					
2.0	35 34	10.21					
1.5	26 4	10.18					
1.0	17 27	9.72					
Def. N.	25 4	10.00	10.08	+ 0.73	10.81		
S.	27 32	10.19					
N. & S.	43 22	10.06					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{AH}$ .	$\frac{1}{d}$ .	Dip.
1876. May 9.	NORTH. 37° 31'	WEST. 33° 48'	NORTH. 61° 43'	+ 0° 3'	N.E. <sup>b</sup> N.	+ 1° 18'	+ 63° 4'	+ 1° 55'	+ 0° 39'	NORTH. 65° 38'
„	38 33	33 23	62 58	+ 0 3	E.N.E.	+ 0 25	+ 63 26	+ 1 53	+ 0 39	65 58
10.	39 48	32 27	63 28	+ 0 3	N.E. <sup>b</sup> E. $\frac{1}{2}$ E.	+ 0 36	+ 64 7	+ 1 52	+ 0 38	66 37
„	40 43	31 56	62 36	+ 0 3	N.N.E. $\frac{3}{4}$ E.	+ 1 21	+ 64 0	+ 1 54	+ 0 38	66 32
11.	41 41	31 45	65 0	+ 0 2	E. <sup>b</sup> N.	+ 0 5	+ 65 7	+ 1 47	+ 0 37	67 31
12.	42 50	28 44	66 42	+ 0 2	S.S.E. $\frac{1}{2}$ E.	- 1 36	+ 65 8	+ 1 50	+ 0 37	67 35
13.	42 33	27 39	65 58	+ 0 2	E. <sup>b</sup> S. $\frac{1}{2}$ S.	- 0 45	+ 65 15	+ 1 50	+ 0 37	67 42

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Deflectors or Grains.	Angle.	$\phi'$ .	Mean $\phi'$ .	Correction for Ship's Head.	Total Force.		
Def. N.	25° 6'	10.00	10.14	+ 0.80	10.94		1876.
S.	27 6	10.22					
N. & S.	42 50	10.27					
Grs. 2.0	35 32	10.21					May 9.
1.5	26 0	10.19					
1.0	17 6	9.97					
Def. N.	25 8	10.00	10.10	+ 0.87	10.97		"
S.	27 20	10.22					
N. & S.	42 58	10.21					
Grs. 2.5	48 8	9.91					
2.0	35 33	10.21					
1.5	26 31	10.02	10.14	+ 0.87	11.01		10.
1.0	16 54	10.10					
Def. N.	25 8	10.00					
S.	27 35	10.11					
N. & S.	42 38	10.36					
Grs. 2.5	47 18	10.07	10.16	+ 0.81	10.97		"
2.0	35 33	10.21					
1.5	26 4	10.16					
1.0	16 55	10.10					
Def. N.	24 57	10.09					
S.	27 20	10.22	10.09	+ 0.91	11.00		11.
N. & S.	42 43	10.33					
Grs. 2.5	46 58	10.14					
2.0	35 32	10.21					
1.5	26 4	10.16					
1.0	17 17	10.00	9.84	+ 1.03	10.87		12
Def. N.	25 28	9.85					
S.	27 33	10.13					
N. & S.	43 7	10.26					
Grs. 2.5	47 15	10.10					
1.5	26 25	10.05	9.74	+ 0.97	10.71		13.
1.0	16 50	10.14					
Def. N.	25 52	9.72					
S.	28 21	9.76					
N. & S.	43 50	9.91					
Grs. 2.5	48 37	9.90	9.74	+ 0.97	10.71		13.
2.0	36 50	9.87					
1.5	26 58	9.86					
1.0	17 25	9.84					
Def. N.	25 26	9.88					
S.	28 10	9.80	9.74	+ 0.97	10.71		13.
N. & S.	43 48	9.92					
Grs. 2.5	50 3	9.68					
2.0	37 18	9.79					
1.5	27 34	9.63					
1.0	18 7	9.49					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$ .	$\frac{1}{d.}$ .	Dip.
1876. May 14.	NORTH. 43° 1'	WEST. 25° 7'	NORTH. 64° 46'	+ 0° 2'	E. <sup>b</sup> N.	+ 0° 5'	+ 64° 53'	+ 1° 53'	+ 0° 37'	67° 23'
15.	42 33	23 0	65 29	+ 0 2	S. E.	- 1 29	+ 64 2	+ 1 57	+ 0 38	66 37
16.	41 56	20 51	64 45	+ 0 2	E. <sup>b</sup> S. <sup>1</sup> / <sub>2</sub> S.	- 0 45	+ 64 2	+ 1 54	+ 0 38	66 34
17.	42 1	18 13	62 23	+ 0 2	E.	- 0 14	+ 62 11	+ 2 3	+ 0 40	64 54
18.	42 36	15 27	62 23	+ 0 2	E. <sup>b</sup> N.	+ 0 5	+ 62 30	+ 1 59	+ 0 40	65 9
19.	42 46	12 28	62 23	+ 0 2	E. <sup>b</sup> S.	- 0 36	+ 61 19	+ 2 9	+ 0 41	64 9
22.	43 52	9 29	59 59	+ 0 2	N. E. <sup>1</sup> / <sub>4</sub> N.	+ 1 7	+ 61 8	+ 2 12	+ 0 41	64 1

Total Force (British Units) ( $\phi$ ).						REMARKS.	Date.
Defectors or Grains.	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	25 46	9.76	9.81	+ 0.91	10.72	Lurching heavily.	1876.
S.	28 19	9.75					May 14.
N. & S.	43 48	9.92					
N.	26 22	9.53	9.64	+ 1.01	10.65		15.
S.	28 52	9.50					
N. & S.	44 53	9.53					
Grs. 2.0	36 56	9.87					
1.5	27 15	9.78					
Def. N.	26 31	9.48	9.38	+ 0.96	10.34		16.
S.	29 9	9.35					
N. & S.	44 58	9.50					
Grs. 2.5	51 50	9.50					
2.0	39 28	9.32					
1.5	29 12	9.20					
1.0	18 32	9.30	9.24	+ 0.91	10.15		17.
Def. N.	27 18	9.18					
S.	29 48	9.04					
N. & S.	45 34	9.29					
Grs. 2.5	52 14	9.46					
2.0	39 41	9.29					
1.5	29 1	9.25	9.28	+ 0.89	10.17		18.
1.0	18 45	9.20					
Def. N.	27 11	9.22					
S.	29 47	9.04					
N. & S.	45 31	9.36					
Grs. 2.0	39 7	9.40					
1.5	28 32	9.40	9.10	+ 0.92	10.02		19.
1.0	18 39	9.25					
Def. N.	27 40	9.04					
S.	29 56	8.98					
N. & S.	45 48	9.24					
Grs. 2.0	40 11	9.18					
1.5	29 33	9.14	9.33	+ 0.79	10.12		22.
1.0	19 5	9.04					
Def. N.	26 58	9.30					
S.	29 23	9.20					
N. & S.	45 7	9.52					
Grs. 2.5	52 13	9.46					
2.0	39 11	9.38					
1.5	29 24	9.16					
1.0	18 40	9.26					

Date.	Geographical Position.		Inclination or Dip ( $\theta$ ).							
	Latitude.	Longitude.	$\theta'$ .	Index Correction.	Ship's Head.	Correction.	Mean N.	$\frac{R}{A.H.}$	$\frac{1}{d.}$	Dip.
1876. May 23.	NORTH. 47° 16'	WEST. 6° 57'	NORTH. 62° 26'	+0° 2'	N.E. $\frac{1}{4}$ E.	+1° 0'	+63° 28'	+1° 59'	+0° 39'	NORTH. 66° 6'
June 1.	51 26	EAST. 0 42	67 31	+0 2	...	...	...	...	...	67 33
2.	51 26.2	0 43.7	62 58 63 13 63 27 65 23 66 36 66 49 66 58 67 10 66 38 65 37 63 45 63 41	+0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2 +0 2	N. N.N.E. N.E. E. S.E. S.S.E. S. S.S.W. S.W. W. N.W. $\frac{1}{4}$ N. N.N.W. N. S.	+1 43 +1 32 +1 6 -0 15 -1 29 -1 39 -1 46 -1 47 -1 13 -0 15 +1 6 +1 35	+65 7	+1 51	+0 37	67 35
July 5.	51 28	WEST. 0 19	67 49	-0 2	...	...	...	...	...	67 47
6.	"	"	67 48	-0 1	...	...	...	...	...	67 47

Deflectors or Grains.	Total Force (British Units) ( $\phi$ ).					REMARKS.	Date.
	Angle.	$\phi$ .	Mean $\phi$ .	Correction for Ship's Head.	Total Force.		
Def. N.	27° 5'	9.27	9.32	+0.82	10.14		1876.
S.	29 11	9.25					
N. & S.	44 52	9.61					
Grs. 2.0	39 20	9.35					May 23.
1.5	28 59	9.26					
1.0	18 49	9.20					
Def. N.	24 31	...	...	...	10.269	Isle of Grain—Sheerness.	June 1.
S.	27 6						
N. & S.	42 43						
Grs. 2.5	46 20						
2.0	35 13						
1.5	25 46						
1.0	16 31						
Def. N.	26 24	9.46	...	+0.79	10.23	Swinging at Sheerness.	2.
N.	26 19	9.49	...	+0.81			
N.	26 34	9.39	...	+0.84			
N.	26 50	9.28	...	+0.94			
N.	26 58	9.22	...	+1.02			
N.	27 2	9.20	...	+1.03			
N.	27 10	9.15	...	+1.04			
N.	27 1	9.20	...	+1.04			
N.	26 53	9.26	...	+1.00			
N.	26 46	9.31	...	+0.94			
N.	26 52	9.26	...	+0.84			
N.	26 41	9.34	...	+0.80			
S.	28 42	9.56	...	+0.79			
S.	29 39	9.17	...	+1.04			
Def. N.	24 27	...	...	...	10.303	Kew Observatory.	July 5.
S.	26 57						
N. & S.	42 27						
Grs. 2.5	46 28						
2.0	35 8						
1.5	25 51						
1.0	16 42						
Def. N.	24 3	...	...	...	10.303	Mounted circle C. 13 needle B.	6.
S.	26 49						
N. & S.	42 11						
Grs. 2.5	46 24						
2.0	35 17						
1.5	25 54						
1.0	16 45						

## 1. DECLINATION.—CO-EFFICIENTS and

TABLE OF STANDARD COMPASS CO-EFFICIENTS.

Date.	Place of Swinging.	A.	B.	C.	D.	E.
Dec. 4, 1872.	Sheerness.	- 0° 1'	+ 6° 28'	+ 0° 16'	+ 0° 23'	- 0° 5'
Jan. 26, 1873.	Gibraltar.	+ 0 8	+ 4 43	- 0 34	+ 0 20	- 0 8
Feb. 15, 1873.	Teneriffe.	0 0	+ 3 56	- 0 25	+ 0 23	- 0 2
Mar. 1 & 3, 1873.	21° 57' N., 43° 29' W.	+ 0 27	+ 3 32	+ 0 9	+ 0 27	+ 0 9
Mar. 23, 1873.	St Thomas, West Indies.	0 0	+ 3 9	- 0 10	+ 0 34	- 0 15
May 20, 1873.	Halifax, Nova Scotia.	- 0 6	+ 7 40	- 0 47	+ 0 29	- 0 5
May 31, 1873.	Bermuda.	0 0	+ 5 5	- 0 6	+ 0 21	- 0 3
July 9, 1873.	St Michael, Azores.	0 0	+ 5 22	+ 0 20	+ 0 31	- 0 7
Aug. 12, 1873.	11° 53' N., 20° 50' W.	0 0	+ 3 17	- 0 11	+ 0 29	+ 0 7
Aug. 29, 1873.	St Paul rocks.	0 0	+ 2 54	- 0 25	+ 0 22	+ 0 9
Sept. 26, 1873.	Bahia.	0 0	+ 2 45	- 0 10	+ 0 20	+ 0 6
Oct. 14, 1873.	Tristan d'Acunha.	0 0	+ 1 50	- 0 31	+ 0 17	- 0 7
Dec. 11, 1873.	Cape of Good Hope.	0 0	+ 1 38	- 0 18	+ 0 9	+ 0 4
Feb. 21, 1874.	63° 30' S., 88° 57' E.	0 0	- 1 18	- 0 6	+ 0 9	0 0
April 4, 1874.	Montague island.	0 0	- 1 27	+ 0 9	+ 0 14	- 0 12
Aug. 11, 1874.	Kanlavan island.	0 0	- 0 15	- 0 16	+ 0 31	- 0 7
Oct. 10, 1874.	Amboina.	0 0	- 0 17	0 0	+ 0 39	- 0 3
Oct. 25, 1874.	Basilan strait (1).	0 0	+ 0 10	- 0 3	+ 0 34	+ 0 1
Jan. 2, 1875.	Hong Kong.	0 0	+ 1 27	0 0	+ 0 23	+ 0 8
Jan. 30, 1875.	Basilan strait (2).	0 0	+ 0 47	+ 0 1	+ 0 34	- 0 4
Feb. 6, 1875.	6° 50' N., 122° 38' E. *	{ 0 0	+ 0 51	- 0 1	+ 0 31	+ 0 4
		{ 0 0	+ 0 58	- 0 10	+ 0 29	- 0 3
April 13, 1875.	Yokohama.	0 0	+ 2 6	+ 0 7	+ 0 36	+ 0 5
July 12, 1875.	37° 52' N., 160° 17' W.	0 0	+ 3 2	- 0 10	+ 0 31	+ 0 5
Aug. 21, 1875.	Honolulu.	0 0	+ 1 58	+ 0 10	+ 0 27	+ 0 1
Oct. 3, 1875.	Tahiti.	0 0	+ 0 21	- 0 1	+ 0 37	- 0 4
Dec. 11, 1875.	Valparaiso.	0 0	+ 0 38	+ 0 10	+ 0 31	- 0 5
Feb. 4, 1876.	Falkland islands.	0 0	- 0 10	+ 0 29	+ 0 17	- 0 7
Feb. 25, 1876.	Monte Video.	0 0	+ 0 40	+ 0 15	+ 0 21	- 0 4
April 3, 1876.	Ascension island.	0 0	+ 1 4	+ 0 3	+ 0 23	0 0
April 19, 1876.	St Vincent, C. de Verde.	0 0	+ 1 32	+ 0 15	+ 0 25	+ 0 3
June 2, 1876.	Sheerness.	+ 0 4	+ 3 22	+ 0 25	+ 0 12	0 0

\* These two values were obtained by swinging the ship in opposite directions.

## DEVIATIONS of STANDARD and FOX COMPASSES.

TABLE OF FOX COMPASS CO-EFFICIENTS.

A.	B.	C.	D.	E.	Dip.	Horizontal Force.	Date.
+0° 8'	+6° 7'	+0° 36'	+0° 16'	-0° 8'	67° 46' N.	1.00	Dec. 4, 1872.
+0 21	+4 17	-0 20	-0 3	+0 3	56 27 N.	1.34	Jan. 26, 1873.
+0 18	+3 54	-0 41	+0 43	-0 13	52 6 N.	1.43	Feb. 15, 1873.
...	...	...	...	...	55 26 N.	1.48	Mar. 1 & 3, 1873.
+0 14	+3 6	-0 5	+0 41	-0 19	49 5 N.	1.72	Mar. 23, 1873.
-0 2	+7 5	-0 54	+0 33	-0 4	74 50 N.	0.85	May 20, 1873.
-0 4	+4 37	+0 1	+0 21	-0 6	66 15 N.	1.27	May 31, 1873.
...	...	...	...	...	63 57 N.	1.21	July 9, 1873.
+0 7	+3 33	-0 8	+0 27	+0 7	16 48 N.	1.74	Aug. 12, 1873.
-0 4	+3 3	-0 39	+0 23	+0 1	22 32 N.	1.69	Aug. 29, 1873.
-0 6	+3 21	-0 30	+0 10	+0 2	2 51 N.	1.54	Sept. 26, 1873.
...	...	...	...	...	40 40 S.	1.32	Oct. 14, 1873.
+0 8	+4 16	-0 8	+0 15	+0 4	56 1 S.	1.11	Dec. 11, 1873.
+0 6	+4 12	-1 26	-0 13	+0 23	79 24 S.	0.65	Feb. 21, 1874.
+0 18	+1 35	-0 15	+0 23	-0 13	65 6 S.	1.43	April 4, 1874.
-0 20	+1 5	+0 3	+0 26	-0 3	38 52 S.	1.97	Aug. 11, 1874.
+0 7	+1 0	+0 22	+0 20	-0 17	20 37 S.	2.14	Oct. 10, 1874.
+0 3	+1 32	+0 6	+0 31	+0 4	2 20 N.	2.14	Oct. 25, 1874.
+0 6	+2 45	-0 13	+0 15	+0 12	32 16 N.	2.00	Jan. 2, 1875.
+0 2	+2 9	-0 3	+0 24	-0 1	2 29 N.	2.14	Jan. 30, 1875.
...	...	...	...	...	2 28 N.	2.14	Feb. 6, 1875.
...	...	...	...	...	2 28 N.	2.14	" "
+0 18	+3 35	-0 2	+0 16	-0 2	48 49 N.	1.65	April 13, 1875.
...	...	...	...	...	55 59 N.	1.42	July 12, 1875.
+0 2	+3 2	+0 3	+0 35	-0 15	39 57 N.	1.68	Aug. 11, 1875.
+0 3	+1 31	-0 3	+0 26	-0 5	30 3 S.	1.86	Oct. 3, 1875.
+0 19	+2 21	+0 1	+0 18	-0 13	33 47 S.	1.58	Dec. 11, 1875.
+0 16	+1 59	+0 17	+0 12	-0 7	48 6 S.	1.55	Feb. 4, 1876.
...	...	...	...	...	29 53 S.	1.49	Feb. 25, 1876.
+0 10	+2 50	-0 11	+0 15	-0 5	7 57 S.	1.58	April 3, 1876.
+0 5	+2 55	+0 10	+0 12	-0 1	43 7 N.	1.61	April 19, 1876.
+0 13	+4 32	-0 15	+0 17	+0 17	67 33 N.	1.00	June 2, 1876.

TABLE OF COMPUTED DEVIATIONS OF STANDARD COMPASS.

Date.	Stations.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.
Dec. 4, 1872.	Sheerness.	+0° 16'	+2° 59'	+5° 9'	+6° 22'	+6° 28'	+5° 38'	+4° 1'
Jan. 26, 1873.	Gibraltar.	-0 34	+1 32	+3 18	+4 24	+4 43	+4 18	+3 22
Feb. 15, 1873.	Teneriffe.	-0 25	+1 23	+2 51	+3 43	+3 56	+3 31	+2 41
Mar. 3, 1873.	21° 57' N. 43° 29' W.	+0 9	+1 46	+3 1	+3 37	+3 32	+2 57	+2 1
Mar. 23, 1873.	St Thomas.	-0 10	+1 20	+1 30	+3 8	+3 9	+2 44	+1 58
May 20, 1873.	Halifax.	-0 47	+2 28	+5 15	+7 3	+7 40	+7 7	+5 35
May 31, 1873.	Bermuda.	-0 6	+2 8	+3 55	+4 56	+5 5	+4 28	+3 17
July 9, 1873.	St Michael.	+0 20	+2 37	+4 25	+5 22	+5 22	+4 34	+3 11
Aug. 12, 1873.	11° 53' N. 20° 50' W.	-0 11	+1 23	+2 34	+3 12	+3 17	+2 50	+2 4
Aug. 29, 1873.	St Paul rocks.	-0 25	+1 0	+2 9	+2 48	+2 54	+2 36	+1 19
Sept. 26, 1873.	Bahia.	-0 10	+1 10	+2 3	+2 44	+2 45	+2 20	+1 41
Oct. 14, 1873.	Tristan d'Acunha.	-0 31	+0 31	+1 20	+1 48	+1 50	+1 36	+1 16
Dec. 11, 1873.	Cape of Good Hope.	-0 18	+0 37	+1 20	+1 39	+1 38	+1 21	+0 58
Feb. 21, 1874.	63° 30' S. 88° 57' E.	-0 6	-0 19	-0 36	-0 57	-1 18	-1 25	-1 14
April 4, 1874.	Montague island.	+0 9	-0 9	-0 37	-1 6	-1 27	-1 46	-1 35
Aug. 11, 1874.	Kandavu.	-0 16	-0 4	+0 1	-0 4	-0 15	-0 26	-0 23
Oct. 10, 1874.	Amboina.	0 0	+0 9	+0 11	0 0	-0 17	-0 32	-0 35
Oct. 25, 1874.	Basilan (1).	-0 3	+0 18	+0 29	+0 25	+0 10	-0 7	-0 15
Jan. 2, 1875.	Hong Kong.	0 0	+0 49	+1 25	+1 37	+1 27	+1 5	+0 39
Jan. 30, 1875.	Basilan (2).	+0 4	+0 38	+1 0	+1 1	+0 47	+0 27	+0 8
Feb. 6, 1875.	5° 50' N. 122° 38' E.	-0 5	-0 32	+0 59	+0 54	+0 54	+0 36	+0 20
April 13, 1875.	Yokohama.	+0 17	+1 11	+1 57	+2 15	+2 6	+1 37	+0 59
July 12, 1875.	37° 52' N. 160° 17' W.	-0 10	+1 17	+2 25	+3 0	+3 2	+2 36	+1 53
Aug. 21, 1875.	Honoruru.	+0 10	+1 10	+1 43	+2 6	+1 58	+1 29	+0 53
Oct. 3, 1875.	Tahiti.	0 0	+0 24	+0 37	+0 34	+0 21	+0 2	-0 9
Dec. 11, 1875.	Valparaiso.	+0 10	+0 39	+0 37	+0 55	+0 38	+0 15	-0 3
Feb. 4, 1876.	Falkland islands.	+0 29	+0 40	+0 37	+0 18	-0 10	-0 36	-0 51
Feb. 25, 1876.	Monte Video.	+0 15	+0 45	+1 2	+0 59	+0 40	+0 15	-0 6
April 3, 1876.	Ascension.	+0 3	+0 44	+1 11	+1 17	+1 4	+0 43	+0 21
April 19, 1876.	St Vincent.	+0 15	+1 5	+1 40	+1 47	+1 32	+1 3	+0 32
June 2, 1876.	Sheerness.	+0 25	+1 57	+3 4	+3 33	+3 22	+2 41	+1 42

TABLE—*Continued.*

S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Date.
+1° 59'	-0° 16'	-2° 27'	-4° 13'	-5° 50'	-6° 28'	-6° 10'	-4° 47'	-2° 31'	Dec. 4, 1872.
+2 4	+0 34	-1 0	-2 32	-3 52	-4 43	-4 50	-4 8	-2 36	Jan. 26, 1873.
+1 37	+0 25	-0 51	-2 5	-3 11	-3 56	-4 3	-3 27	-2 9	Feb. 15, 1873.
+0 56	-0 9	-1 14	-2 15	-3 5	-3 32	-3 29	-3 47	-1 28	Mar. 3, 1873.
+1 6	+0 10	-0 48	-1 44	-2 36	-3 9	-3 16	-2 37	-1 38	Mar. 23, 1873.
+3 24	+0 47	-1 56	-4 29	-6 31	-7 40	-7 39	-6 21	-3 56	May 20, 1873.
+1 46	+0 6	-1 36	-3 9	-4 24	-5 5	-5 0	-4 3	-2 18	May 31, 1873.
+1 29	-0 20	-2 5	-3 39	-4 50	-5 22	-5 6	-3 57	-2 1	July 9, 1873.
+1 9	+0 11	-0 49	-1 48	-2 38	-3 17	-3 24	-2 50	-1 43	Aug. 12, 1873.
+1 14	+0 25	-0 28	-1 23	-2 16	-2 54	-3 8	-2 45	-1 46	Aug. 29, 1873.
+0 56	+0 10	-0 38	-1 27	-2 12	-2 45	-2 52	-2 27	-1 28	Sept. 26, 1873.
+0 53	+0 31	+0 3	-0 34	-1 14	-1 50	-2 10	-2 2	-1 27	Oct. 14, 1873.
+0 37	+0 18	-0 5	-0 34	-1 7	-1 38	-1 53	-1 44	-1 9	Dec. 11, 1873.
-0 41	+0 6	+0 51	+1 22	+1 29	+1 18	+0 53	+0 28	+0 9	Feb. 21, 1874.
-0 59	-0 9	+0 43	+1 23	+1 40	+1 27	+1 12	+0 49	+0 25	April 4, 1874.
-0 8	+0 16	+0 36	+0 45	+0 36	+0 15	-0 6	-0 23	-0 24	Aug. 11, 1874.
-0 23	0 0	+0 23	+0 35	+0 32	+0 17	0 0	-0 11	-0 9	Oct. 10, 1874.
-0 10	+0 3	+0 14	+0 17	+0 7	-0 10	-0 25	-0 31	-0 22	Oct. 25, 1874.
+0 17	0 0	-0 17	-0 39	-1 5	-1 27	-1 37	-1 25	-0 49	Jan. 2, 1875.
-0 2	-0 4	-0 6	-0 15	-0 29	-0 47	-0 59	-0 54	-0 30	Jan. 30, 1875.
+0 10	+0 5	0 0	-0 12	-0 32	-0 54	-1 8	-1 6	-0 42	Feb. 6, 1875.
+0 25	-0 7	-0 39	-1 11	-1 43	-2 6	-2 9	-1 45	-0 57	April 13, 1875.
+1 13	+0 10	-0 45	-1 39	-2 28	-3 2	-3 8	-2 39	-1 35	July 12, 1875.
+0 20	-0 10	-0 38	-1 7	-1 37	-1 58	-2 1	-1 39	-0 52	Aug. 21, 1875.
-0 8	0 0	+0 8	+0 9	-0 2	-0 21	-0 34	-0 37	-0 24	Oct. 3, 1875.
-0 11	-0 10	-0 7	-0 11	-0 13	-0 38	-0 47	-0 43	-0 21	Dec. 11, 1875.
-0 48	-0 29	-0 8	+0 9	+0 14	+0 10	+0 4	+0 5	+0 16	Feb. 4, 1876.
-0 15	-0 15	-0 13	-0 16	-0 27	-0 40	-0 47	-0 10	-0 17	Feb. 26, 1876.
-0 6	-0 3	-0 12	-0 25	-0 45	-1 4	-1 15	-1 7	-0 38	April 3, 1876.
-0 5	-0 15	-0 33	-0 54	-1 15	-1 32	-1 35	-1 18	-0 37	April 19, 1876.
+0 39	-0 25	-1 25	-2 18	-3 1	-3 22	-3 13	-2 28	-1 11	June 2, 1876.

TABLE OF COMPUTED DEVIATIONS OF THE COMPASS IN FOX CIRCLE POSITION.

Date.	Station.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.
Dec. 4, 1872.	Sheerness.	+0° 36'	+3° 7'	+5° 10'	+6° 18'	+6° 23'	+5° 28'	+3° 46'
Jan. 26, 1873.	Gibraltar.	+0 4	+1 42	+3 6	+4 7	+4 35	+4 27	+3 40
Feb. 15, 1873.	Teneriffe.	-0 44	+1 23	+3 11	+4 10	+4 17	+3 40	+2 41
Mar. 23, 1873.	St Thomas.	-0 10	+1 34	+3 2	+3 47	+3 39	+2 54	+1 48
May 20, 1873.	Halifax.	-1 0	+2 11	+4 53	+6 36	+7 7	+6 32	+5 5
May 31, 1873.	Bermuda.	-0 9	+1 53	+3 34	+4 32	+4 39	+4 2	+2 50
Aug. 12, 1873.	11° 53' N., 20° 50' W.	+0 6	+1 46	+2 59	+3 36	+3 33	+3 2	+2 17
Aug. 29, 1873.	St Paul rocks.	-0 34	+0 55	+2 8	+2 53	+3 6	+2 51	+2 18
Sept. 26, 1873.	Bahia.	-0 34	+0 52	+2 5	+2 54	+3 13	+3 2	+2 27
Dec. 11, 1873.	Cape of Good Hope.	0 0	+1 45	+3 7	+3 55	+4 5	+3 39	+2 47
Feb. 21, 1874.	63° 30' S., 88° 57' E.	-0 43	+0 35	+1 51	+2 56	+3 47	+4 20	+4 17
April 4, 1874.	Montague island.	0 0	+0 47	+1 27	+1 51	+1 56	+1 45	+1 23
Aug. 11, 1874.	Kandavu.	-0 20	+0 24	+0 54	+1 2	+0 48	+0 23	-0 2
Oct. 10, 1874.	Amboina.	+0 12	+0 54	+1 25	+1 37	+1 24	+0 51	+0 13
Oct. 25, 1874.	Basilan (1).	+0 13	+1 8	+1 43	+1 48	+1 31	+1 2	+0 33
Jan. 2, 1875.	Hong Kong.	+0 5	+1 17	+2 3	+2 35	+2 39	+2 23	+1 57
Jan. 30, 1875.	Basilan (2).	-0 2	+1 6	+1 55	+2 19	+2 12	+1 45	+1 11
April 13, 1875.	Yokohama.	+0 1	+1 40	+3 33	+3 51	+3 57	+3 25	+2 31
Aug. 21, 1875.	Honolulu.	-0 10	+1 29	+2 48	+3 27	+3 19	+2 35	+1 34
Oct. 3, 1875.	Tahiti.	-0 5	+0 48	+1 31	+1 48	+1 39	+1 14	+0 43
Dec. 11, 1875.	Valparaiso.	+0 7	+1 18	+2 16	+2 51	+2 54	+2 25	+1 39
Feb. 4, 1876.	Falkland islands.	+0 26	+1 22	+2 5	+2 27	+2 22	+1 55	+1 17
April 3, 1876.	Ascension.	-0 6	+1 13	+2 18	+2 58	+3 5	+2 44	+2 2
April 19, 1876.	St Vincent.	-0 1	+1 26	+2 34	+3 7	+3 1	+2 27	+1 38
June 2, 1876.	Sheerness.	+0 15	+2 7	+3 32	+4 19	+4 28	+4 7	+3 20

TABLE—*Continued.*

S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Date.
+1 38'	-0 36'	-2 40'	-4 22'	-5 26'	-5 51'	-5 24'	-4 2'	-1 58'	Dec. 4, 1872.
+2 22	+0 44	-1 0	-2 30	-3 33	-3 59	-3 45	-2 52	-1 32	Jan. 26, 1873.
+1 39	+0 38	-0 21	-1 23	-2 32	-3 31	-1 2	-3 47	-2 37	Feb. 15, 1873.
+0 46	0 0	-0 37	-1 12	-1 54	-2 33	-2 54	-2 42	-1 44	Mar. 23, 1873.
+3 5	+0 48	-1 35	-3 51	-5 48	-7 3	-7 16	-6 15	-4 1	May 20, 1873.
+1 21	-0 11	-1 41	-3 0	-4 0	-4 35	-4 30	-3 50	-2 9	May 31, 1873.
+1 20	+0 22	-0 42	-1 51	-2 52	-3 33	-3 38	-2 57	-1 36	Aug. 12, 1873.
+1 35	+0 44	-0 13	-1 14	-2 15	-3 0	-3 17	-2 56	-1 57	Aug. 29, 1873.
+1 34	+0 26	-0 46	-1 57	-2 56	-3 29	-3 32	-2 59	-1 56	Sept. 26, 1873.
+1 37	+0 16	-1 9	-2 29	-3 31	-4 5	-3 59	-3 9	-1 15	Dec. 11, 1873.
+3 33	+2 3	-0 1	-2 5	-3 44	-4 37	-1 32	-3 39	-2 21	Feb. 21, 1874.
+0 57	+0 30	+0 3	-0 25	-0 53	-1 14	-1 23	-1 13	-0 43	April 4, 1874.
-0 18	-0 26	-0 32	-0 42	-1 2	-1 22	-1 35	-1 30	-1 2	Aug. 11, 1874.
-0 16	-0 32	-0 34	-0 31	-0 31	-0 36	-0 41	-0 39	-0 22	Oct. 10, 1874.
+0 14	+0 1	-0 14	-0 35	-1 6	-1 33	-1 44	-1 29	-0 44	Oct. 25, 1874.
+1 13	+0 31	-0 31	-1 27	-2 19	-2 51	-2 51	-2 15	-1 11	Jan. 2, 1875.
+0 36	+0 4	-0 28	-1 3	-1 37	-2 6	-2 15	-1 55	-1 10	Jan. 30, 1875.
+1 24	+0 17	-0 44	-1 43	-2 31	-3 3	-3 9	-2 39	-1 32	April 13, 1875.
+0 33	-0 16	-0 57	-1 34	-2 11	-2 45	-2 59	-2 40	-1 41	Aug. 21, 1875.
+0 18	+0 1	-0 11	-0 33	-0 58	-1 23	-1 36	-1 29	-0 56	Oct. 3, 1875.
+0 50	+0 7	-0 30	-1 2	-1 29	-1 49	-1 55	-1 39	-0 58	Dec. 11, 1875.
+0 32	-0 8	-0 42	-1 9	-1 27	-1 36	-1 31	-1 9	-0 28	Feb. 4, 1876.
+1 9	+0 16	-0 39	-1 28	-2 8	-2 35	-2 38	-2 12	-1 19	April 3, 1876.
+0 46	-0 1	-0 46	-1 30	-2 11	-2 43	-2 51	-2 26	-1 26	April 19, 1876.
+1 45	+0 45	-0 53	-2 32	-3 53	-4 36	-1 29	-3 28	-1 45	June 2, 1876.

## 2. INCLINATION.—CORRECTIONS for

TABLE OF CORRECTIONS TO BE APPLIED TO  $\theta$  FOR DIFFERENT  
POSITIONS OF SHIP'S HEAD.

Date.	Station.	Co-efficient N.*	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.
Dec. 5, 1872.	Sheerness.	+63° 53'	+2° 11'	+1° 52'	+1° 35'	+0° 37'	-0° 20'	-1° 9'
Jan. 26, 1873.	Gibraltar.	+51 20	+1 54	+1 14	+1 21	+0 45	0 0	-0 48
Mar. 22, 1873.	St Thomas.	+42 51	+1 2	+0 57	+0 26	-0 7	-0 42	-1 5
May 31, 1873.	Bermuda.	+61 25	+1 59	+1 49	+1 14	+0 34	-0 12	-0 50
Aug. 29, 1873.	St Paul rocks.	+11 52	-0 6	-0 3	-0 12	-0 7	-0 5	-0 6
Sept. 26, 1873.	Bahia.	- 9 41	-0 55	-0 52	-0 37	-0 19	+0 2	+0 25
Dec. 11, 1873.	Cape of Good Hope.	-59 7	-1 30	-1 20	-1 3	-0 27	+0 12	+0 46
Feb. 22, 1874.	63° 30' S. 90° 47' E.	-79 28	-1 8	-1 7	-0 37	-0 21	+0 3	+0 29
April 4, 1874.	Montague island.	-65 5	-0 51	-0 45	-0 33	-0 13	+0 10	+0 31
Aug. 11, 1874.	Kandavu.	-40 12	-1 0	-0 56	-0 21	+0 1	+0 25	+0 42
Oct. 11, 1874.	Amboina.	-23 12	-0 55	-0 47	-0 41	-0 14	+0 14	+0 35
Oct. 23, 1874.	Basilan (1).	- 1 25	-0 26	-0 23	-0 18	-0 9	+0 2	+0 12
Jan. 2, 1875.	Hong-Kong.	+27 31	+0 23	+0 18	+0 8	-0 3	-0 13	-0 20
Jan. 30, 1875.	Basilan (2).	- 3 12	-0 20	-0 18	-0 13	-0 5	+0 3	+0 11
April 13, 1875.	Yokohama (1).	+45 5	+0 41	+0 33	+0 23	+0 4	-0 21	-0 38
June 6, 1875.	Yokohama (2).	+44 52	+1 28	+1 17	+0 57	+0 19	-0 23	-0 59
Aug. 11, 1875.	Honoruru.	+34 43	+1 31	+1 21	+0 51	+0 11	-0 31	-1 3
Oct. 3, 1875.	Tahiti.	-33 59	-1 33	-1 22	-0 53	-0 18	+0 25	+1 0
Dec. 11, 1875.	Valparaiso.	-36 35	-1 11	-1 0	-0 52	-0 21	+0 15	+0 46
Feb. 4, 1876.	Falkland islands.	-50 5	-1 13	-1 2	-0 43	-0 14	+0 14	+0 34
April 3, 1876.	Ascension.	-14 1	-0 57	-0 52	-0 37	-0 16	+0 8	+0 31
April 19, 1876.	St Vincent.	+38 6	+1 32	+1 21	+0 53	+0 15	-0 27	-1 0
June 2, 1876.	Sheerness.	+65 7	+1 43	+1 32	+1 6	+0 26	-0 15	-0 54

\* N as computed by formulæ, page 2 of Addenda to the Magnetical Instructions.

## DIRECTION OF SHIP'S HEAD.

TABLE.—*Continued.*

S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Date.
-1° 49'	-2° 13'	-2° 19'	-2° 6'	-1° 55'	-1° 9'	-0° 20'	+0° 29'	+1° 41'	+2° 5'	Dec. 5, 1872.
-1 39	-1 49	-1 51	-1 50	-1 2	-0 36	0 0	+0 40	+1 13	+1 46	Jan. 26, 1873.
-1 6	-1 6	-1 6	-1 6	-0 57	-0 54	-0 41	-0 17	+0 15	+0 51	Mar. 22, 1873.
-1 17	-1 38	-1 41	-1 38	-1 21	-0 50	-0 12	+0 31	+1 21	+1 47	May 31, 1873.
-0 6	+0 8	+0 8	+0 7	+0 7	-0 3	-0 5	-0 6	-0 3	-0 8	Aug. 29, 1873.
+0 44	+0 50	+0 58	+0 50	+0 44	+0 25	+0 2	-0 17	-0 43	-0 48	Sept. 26, 1873.
+1 15	+1 27	+1 36	+1 34	+1 4	+0 44	+0 13	-0 25	-0 58	-1 22	Dec. 11, 1873.
+0 46	+0 58	+1 3	+0 59	+0 46	+0 24	+0 3	-0 29	-1 1	-1 5	Feb. 22, 1874.
+0 42	+0 52	+0 51	+0 50	+0 41	+0 24	+0 10	-0 8	-0 28	-0 46	April 4, 1874.
+0 51	+1 0	+1 0	+1 0	+0 55	+0 42	+0 24	-0 6	-0 39	-0 49	Aug. 11, 1874.
+0 44	+0 58	+0 57	+0 50	+0 50	+0 32	+0 14	-0 5	-0 32	-0 51	Oct. 11, 1874.
+0 20	+0 26	+0 28	+0 26	+0 20	+0 12	+0 2	-0 8	-0 18	-0 24	Oct. 23, 1874.
-0 24	-0 25	-0 26	-0 25	-0 24	-0 20	-0 13	0 0	+0 13	+0 21	Jan. 2, 1875.
+0 17	+0 21	+0 21	+0 21	+0 16	+0 11	+0 3	-0 5	-0 13	-0 18	Jan. 30, 1875.
-0 45	-0 48	-0 48	-0 46	-0 44	-0 32	-0 22	-0 5	+0 11	+0 36	April 13, 1875.
-1 26	-1 32	-1 35	-1 31	-1 19	-0 49	-0 27	+0 10	+0 45	+1 19	June 6, 1875.
-1 20	-1 34	-1 33	-1 30	-1 20	-0 59	-0 31	+0 5	+0 47	+1 18	Aug. 11, 1875.
+1 20	+1 28	+1 34	+1 30	+1 15	+0 56	+0 25	-0 16	-0 52	-1 20	Oct. 3, 1875.
+1 5	+1 9	+1 13	+1 13	+0 48	+0 36	+0 16	-0 9	-0 34	-1 4	Dec. 11, 1875.
+0 45	+1 4	+1 16	+1 1	+0 42	+0 29	+0 14	-0 20	-0 50	-1 10	Feb. 4, 1876.
+0 51	+0 58	+1 3	+1 1	+0 43	+0 28	+0 8	-0 15	-0 37	-0 51	April 3, 1876.
-1 23	-1 34	-1 37	-1 35	-1 19	-0 58	-0 27	+0 12	+0 50	+1 22	April 19, 1876.
-1 29	-1 39	-1 46	-1 47	-1 13	-0 52	-0 15	+0 28	+1 6	+1 35	June 2, 1876.

[illegible]

## NORTHERN and SOUTHERN HEMISPHERES.

TABLE—*Continued.*

Values of $\frac{R}{AH}$ .									Co-efficient N.
-210.	-190.	-170.	-150.	-130.	-110.	-090.	-070.	-050.	
...	...	...	...	...	...	...	...	...	74
...	...	...	...	...	...	...	...	...	73
...	...	...	...	...	...	...	...	...	72
...	...	...	...	...	...	...	...	...	71
...	...	...	...	...	...	...	...	...	70
...	...	...	...	...	...	...	...	...	69
1 34	...	...	...	...	...	...	...	...	68
1 42	...	...	...	...	...	...	...	...	67
1 51	1 41	...	...	...	...	...	...	...	66
1 59	1 49	...	...	...	...	...	...	...	65
2 8	1 57	1 45	...	...	...	...	...	...	64
2 17	2 5	1 53	...	...	...	...	...	...	63
2 26	2 13	2 0	...	...	...	...	...	...	62
2 36	2 22	2 8	1 54	1 40	...	...	...	...	61
2 45	2 31	2 16	2 1	1 46	...	...	...	...	60
2 55	2 40	2 24	2 8	1 52	...	...	...	...	59
3 5	2 49	2 32	2 16	1 59	...	...	...	...	58
3 15	2 58	2 41	2 23	2 5	...	...	...	...	57
3 25	3 8	2 49	2 31	2 12	...	...	...	...	56
3 36	3 17	2 58	2 38	2 19	...	...	...	...	55
3 47	3 27	3 7	2 46	2 25	2 4	...	...	...	54
3 57	3 37	3 15	2 54	2 32	2 10	...	...	...	53
4 8	3 46	3 24	3 2	2 39	2 16	...	...	...	52
4 19	3 56	3 33	3 10	2 46	2 22	...	...	...	51
4 30	4 6	3 42	3 18	2 53	2 28	...	...	...	50
4 41	4 17	3 52	3 26	3 1	2 34	...	...	...	49
4 52	4 27	4 1	3 35	3 8	2 40	...	...	...	48
5 3	4 37	4 10	3 43	3 15	2 47	...	...	...	47
5 14	4 47	4 19	3 51	3 22	2 53	...	...	...	46
5 26	4 58	4 29	3 59	3 30	2 59	...	...	...	45
5 37	5 8	4 38	4 8	3 37	3 5	2 33	...	...	44
5 48	5 18	4 48	4 16	3 44	3 12	2 38	...	...	43
6 0	5 29	4 57	4 24	3 52	3 18	2 43	...	...	42
6 11	5 39	5 6	4 33	3 59	3 24	2 49	...	...	41
6 23	5 49	5 16	4 41	4 6	3 30	2 54	...	...	40
6 34	5 59	5 25	4 50	4 13	3 37	2 59	...	...	39
6 45	6 10	5 34	4 58	4 21	3 43	3 4	...	...	38
6 56	6 20	5 43	5 6	4 28	3 49	3 9	...	...	37
7 7	6 30	5 53	5 14	4 35	3 55	3 14	...	...	36
7 19	6 41	6 2	5 22	4 42	4 1	3 19	...	...	35



TABLE—Continued.

Values of $\frac{R}{\sin}$									Co-efficient N.
-210.	-190.	-170.	-150.	-130.	-110.	-090.	-070.	-050.	
7° 30'	6° 51'	6° 11'	5° 30'	4° 49'	4° 7'	3° 24'	...	...	34°
7 41	7 1	6 20	5 38	4 56	4 13	3 29	...	...	33
7 52	7 11	6 29	5 46	5 3	4 19	3 34	...	...	32
8 2	7 20	6 38	5 54	5 10	4 25	3 38	...	...	31
8 13	7 30	6 46	6 2	5 16	4 30	3 43	...	...	30
8 24	7 40	6 55	6 9	5 23	4 36	3 48	...	...	29
8 34	7 49	7 3	6 17	5 30	4 41	3 52	3 2	...	28
8 44	7 58	7 12	6 24	5 36	4 47	3 57	3 6	...	27
8 54	8 8	7 20	6 32	5 42	4 52	4 1	3 9	...	26
9 4	8 17	7 28	6 39	5 49	4 57	4 5	3 12	...	25
9 14	8 25	7 36	6 46	5 54	5 2	4 9	3 15	...	24
9 24	8 34	7 44	6 53	6 1	5 7	4 14	3 19	...	23
9 33	8 43	7 51	6 59	6 6	5 12	4 17	3 22	...	22
9 43	8 51	7 59	7 6	6 12	5 17	4 21	3 25	...	21
9 51	8 59	8 6	7 12	6 17	5 22	4 25	3 28	...	20
									19
10 9	9 15	8 20	7 24	6 28	5 30	4 32	3 33	2 33	18
									17
10 25	9 29	8 33	7 35	6 37	5 38	4 39	3 38	2 37	16
									15
10 40	9 43	8 45	7 46	6 46	5 46	4 45	3 43	2 40	14
									13
10 54	9 56	8 56	7 56	6 54	5 53	4 50	3 47	2 43	12
									11
11 7	10 7	9 6	8 4	7 2	5 59	4 55	3 50	2 45	10
									9
11 19	10 17	9 15	8 12	7 8	6 4	4 59	3 53	2 47	8
									7
11 30	10 27	9 23	8 19	7 14	6 9	5 2	3 56	2 49	6
									5
11 38	10 33	9 30	8 24	7 18	6 12	5 5	3 58	2 50	4
									3
11 46	10 41	9 35	8 29	7 22	6 15	5 7	3 59	2 51	2
									1
11 52	10 46	9 39	8 32	7 25	6 17	5 9	4 0	2 52	0

TABLE OF CORRECTIONS FOR VALUES OF  $\frac{R}{\Delta H}$  FOR EACH DEGREE OF  
CO-EFFICIENT N (SOUTHERN HEMISPHERE).

Co-efficient N.	Values of $\frac{R}{\Delta H}$								
	-400.	-380.	-360.	-340.	-320.	-300.	-280.	-260.	-240.
80	0° 45'	0° 42'	0° 40'	0° 37'	0° 35'	0° 33'	0° 30'	0° 28'	0° 26'
79	0 54	0 51	0 48	0 45	0 43	0 40	0 37	0 34	0 31
78	1 5	1 1	0 58	0 54	0 51	0 47	0 44	0 41	0 37
77	1 16	1 12	1 8	1 4	1 0	0 56	0 52	0 48	0 44
76	1 29	1 24	1 19	1 14	1 9	1 5	1 0	0 56	0 51
75	1 42	1 37	1 31	1 25	1 20	1 15	1 9	1 4	0 59
74	1 57	1 51	1 44	1 38	1 31	1 25	1 19	1 13	1 7
73	2 13	2 5	1 57	1 50	1 43	1 36	1 29	1 22	1 15
72	2 29	2 20	2 12	2 5	1 56	1 48	1 40	1 32	1 25
71	2 46	2 37	2 28	2 18	2 9	2 0	1 52	1 43	1 34
70	3 5	2 54	2 44	2 33	2 23	2 13	2 4	1 54	1 45
69	3 24	3 12	3 1	2 49	2 38	2 27	2 16	2 6	1 55
68	3 44	3 31	3 18	3 6	2 53	2 41	2 29	2 18	2 6
67	4 5	3 51	3 37	3 23	3 10	2 56	2 43	2 30	2 18
66	4 27	4 11	3 56	3 41	3 26	3 12	2 57	2 43	2 30
65	4 49	4 22	4 15	3 59	3 43	3 28	3 12	2 57	2 42
64	5 13	4 55	4 37	4 19	4 1	3 44	3 28	3 11	2 55
63	5 37	5 17	4 57	4 38	4 20	4 1	3 43	3 25	3 8
62	6 2	5 40	5 19	4 59	4 39	4 19	3 59	3 40	3 21
61	6 28	6 5	5 42	5 20	4 58	4 37	4 16	3 56	3 35
60	6 54	6 29	6 5	5 42	5 18	4 56	4 33	4 11	3 50
59	7 21	6 55	6 29	6 4	5 39	5 15	4 51	4 28	4 5
58	7 48	7 20	6 53	6 26	5 51	5 34	5 8	4 44	4 20
57	8 15	7 46	7 17	6 48	6 21	5 53	5 26	5 0	4 34
56	...	...	...	7 11	6 42	6 13	5 44	5 16	4 49
55	...	...	...	7 35	7 4	6 31	6 4	5 34	5 6
54	...	...	...	...	...	...	6 23	5 52	5 21
53	...	...	...	...	...	...	6 41	6 8	5 36
52	...	...	...	...	...	...	7 0	6 25	5 52
51	...	...	...	...	...	...	7 19	6 43	6 8
50	...	...	...	...	...	...	7 39	7 2	6 26
49	...	...	...	...	...	...	7 58	7 19	6 41
48	...	...	...	...	...	...	8 18	7 38	6 58
47	...	...	...	...	...	...	8 37	7 55	7 14
46	...	...	...	...	...	...	8 56	8 13	7 30
45	...	...	...	...	...	...	9 15	8 30	7 46
44	...	...	...	...	...	...	9 35	8 49	8 3
43	...	...	...	...	...	...	9 53	9 5	8 19
42	...	...	...	...	...	...	10 12	9 22	8 34
41	...	...	...	...	...	...	10 30	9 39	8 49

TABLE—Continued.

Values of $\frac{R}{A'H}$									Co-efficient N.
-220.	-200.	-180.	-160.	-140.	-120.	-100.	-80.	-60.	
0° 23'	0° 21'	0° 19'	0° 17'	°	°	°	°	°	80°
0 29	0 26	0 23	0 21	...	...	...	...	...	79
0 34	0 31	0 28	0 25	...	...	...	...	...	78
0 40	0 36	0 33	0 29	...	...	...	...	...	77
0 47	0 42	0 38	0 33	...	...	...	...	...	76
0 54	0 48	0 43	0 38	...	...	...	...	...	75
1 1	0 55	0 49	0 44	...	...	...	...	...	74
1 9	1 2	0 56	0 49	...	...	...	...	...	73
1 17	1 10	1 2	0 55	...	...	...	...	...	72
1 26	1 18	1 9	1 1	...	...	...	...	...	71
1 35	1 26	1 17	1 8	0 59	0 50	0 42	...	...	70
1 45	1 34	1 24	1 14	1 5	0 55	0 46	...	...	69
1 55	1 44	1 33	1 22	1 11	1 0	0 50	...	...	68
2 5	1 53	1 41	1 29	1 17	1 6	0 54	...	...	67
2 16	2 3	1 51	1 37	1 24	1 11	0 59	...	...	66
2 27	2 13	1 58	1 44	1 31	1 17	1 4	...	...	65
2 39	2 22	2 8	1 53	1 38	1 23	1 9	...	...	64
2 51	2 34	2 17	2 1	1 45	1 29	1 14	...	...	63
3 3	2 45	2 27	2 9	1 53	1 36	1 19	...	...	62
3 16	2 56	2 37	2 18	2 0	1 42	1 24	...	...	61
3 29	3 8	2 47	2 27	2 8	1 49	1 30	...	...	60
3 42	3 20	2 58	2 37	2 16	1 55	1 35	...	...	59
3 56	3 32	3 9	2 47	2 24	2 2	1 41	...	...	58
4 9	3 44	3 20	2 56	2 32	2 9	1 47	...	...	57
4 22	3 56	3 30	3 5	2 41	2 16	1 53	...	...	56
4 37	4 9	3 42	3 16	2 49	2 24	1 59	...	...	55
4 52	4 23	3 54	3 26	2 58	2 31	2 5	...	...	54
5 5	4 35	4 4	3 35	3 7	2 38	2 11	...	...	53
5 19	4 47	4 16	3 45	3 16	2 46	2 17	...	...	52
5 34	5 0	4 28	3 55	3 24	2 53	2 23	...	...	51
5 50	5 16	4 41	4 7	3 33	3 1	2 29	...	...	50
6 4	5 28	4 52	4 17	3 42	3 9	2 36	...	...	49
6 19	5 41	5 4	4 28	3 51	3 16	2 42	...	...	48
6 34	5 54	5 16	4 38	4 0	3 24	2 48	...	...	47
6 49	6 8	5 28	4 48	4 9	3 31	2 54	...	...	46
7 3	6 20	5 39	4 58	4 18	3 39	3 1	2 23	...	45
7 18	6 35	5 52	5 9	4 27	3 47	3 7	2 28	...	44
7 32	6 47	6 3	5 19	4 36	3 54	3 13	2 33	...	43
7 47	7 0	6 14	5 29	4 45	4 2	3 19	2 38	...	42
8 0	7 13	6 25	5 39	4 54	4 9	3 26	2 43	...	41

## THE VOYAGE OF H.M.S. CHALLENGER.

TABLE OF CORRECTIONS FOR VALUES OF  $\frac{R}{A_H}$  FOR EACH DEGREE OF  
CO-EFFICIENT N (SOUTHERN HEMISPHERE).

[illegible]

TABLE—*Continued.*

Value of $\frac{R}{\lambda \cdot H}$ .									Coefficient N.
-220.	-200.	-180.	-160.	-140.	-120.	-100.	-080.	-060.	
8 44	7 25	6 36	5 49	5 3	4 17	3 32	2 48	...	40
8 28	7 38	6 48	5 59	5 11	4 24	3 39	2 53	...	39
8 42	7 50	6 59	6 9	5 19	4 31	3 44	2 57	...	38
8 56	8 3	7 11	6 19	5 28	4 39	3 50	3 2	...	37
9 9	8 15	7 21	6 29	5 36	4 46	3 56	3 7	...	36
9 21	8 26	7 31	6 37	5 45	4 53	4 2	3 12	...	35
9 34	8 38	7 42	6 47	5 52	4 59	4 7	3 16	2 28	34
...	8 49	7 52	6 56	6 1	5 7	4 13	3 21	2 30	33
...	8 57	8 0	7 3	6 7	5 12	4 18	3 24	2 32	32
...	9 9	8 10	7 12	6 15	5 18	4 23	3 28	2 35	31
...	9 20	8 20	7 21	6 23	5 26	4 29	3 34	2 39	30
...	9 30	8 29	7 29	6 30	5 32	4 34	3 38	2 42	29
...	9 38	8 36	7 35	6 35	5 36	4 38	3 40	2 44	28
...	9 49	8 47	7 45	6 44	5 44	4 45	3 46	2 49	27
...	9 56	8 52	7 50	6 48	5 48	4 47	3 48	2 51	26
...	10 6	9 2	7 59	6 56	5 54	4 54	3 53	2 54	25
...	10 14	9 9	8 5	7 2	6 0	4 57	3 56	2 56	24
...	10 28	9 22	8 17	7 12	6 8	5 5	4 2	3 1	23
...	10 41	9 35	8 28	7 23	6 17	5 13	4 9	3 6	22
...	10 53	9 45	8 38	7 31	6 25	5 19	4 14	3 10	21
...	11 3	9 54	8 47	7 39	6 32	5 25	4 19	3 13	20
...	11 11	10 2	8 54	7 46	6 38	5 30	4 23	3 17	19
...	11 17	10 8	9 0	7 51	6 43	5 35	4 27	3 20	18
...	11 21	10 13	9 4	7 55	6 47	5 38	4 30	3 22	17
...	11 24	10 16	9 7	7 58	6 49	5 41	4 32	3 24	16
...	11 25	10 17	9 9	8 0	6 51	5 42	4 34	3 25	15
...	11 25	10 17	9 9	8 1	6 52	5 44	4 35	3 26	14
...	11 23	10 16	9 8	8 0	6 52	5 44	4 35	3 26	13
...	11 19	10 12	9 6	7 58	6 51	5 43	4 35	3 26	12
...									11
...									10
...									9
...									8
...									7
...									6
...									5
...									4
...									3
...									2
...									1
...									0

4. INCLINATION.—TABLE OF THE CORRECTION  $\frac{1}{d}$  FOR VALUES OF  $d$ .  
*+ in North Dip.* *- in South Dip.*

N — $\frac{R}{AH}$	Values of $d$ .									N — $\frac{R}{AH}$
	·98.	·97.	·96.	·95.	·94.	·93.	·92.	·91.	·90.	
80°	0° 12'	0° 18'	0° 24'	0° 29'	0° 35'	0° 41'	0° 47'	0° 53'	0° 59'	80°
75	0 17	0 26	0 34	0 43	0 52	1 0	1 9	1 18	1 26	75
70	0 22	0 33	0 44	0 56	1 7	1 18	1 29	1 30	1 52	70
65	0 26	0 39	0 53	1 6	1 20	1 33	1 47	2 0	2 14	65
60	0 30	0 45	1 1	1 16	1 31	1 46	2 1	2 16	2 31	60
55	0 32	0 48	1 5	1 22	1 39	1 56	2 13	2 30	2 47	55
50	0 34	0 51	1 9	1 26	1 44	2 2	2 20	2 38	2 56	50
45	0 35	0 52	1 10	1 28	1 46	2 4	2 23	2 42	3 1	45
40	0 34	0 51	1 9	1 27	1 45	2 3	2 22	2 41	3 0	40
35	0 33	0 50	1 7	1 24	1 41	1 59	2 17	2 35	2 53	35
30	0 30	0 45	1 1	1 17	1 33	1 50	2 7	2 24	2 41	30
25	0 27	0 40	0 54	1 9	1 23	1 38	1 53	2 8	2 23	25
20	0 22	0 34	0 46	0 58	1 10	1 22	1 35	1 48	2 1	20
15	0 18	0 27	0 36	0 45	0 55	1 5	1 14	1 25	1 35	15
10	0 12	0 18	0 24	0 31	0 38	0 44	0 51	0 58	1 5	10
5	0 6	0 9	0 12	0 15	0 19	0 22	0 26	0 29	0 33	5

## 5. TOTAL FORCE.—TABLES OF EQUIVALENT WEIGHTS.

TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, I 27; NEEDLE A. 1872-73.

Angle.	North Deflector.		South Deflector.		Angle.	North and South Deflectors.	
	Kew (1).	C. G. Hope.	Kew (1).	C. G. Hope.		Kew (1).	C. G. Hope.
	28. x. 72.	20. xl. 73.	28. x. 72.	20. xl. 73.		28 x. 72.	20. xl. 73.
	Grains.	Grains.	Grains.	Grains.		Grains.	Grains.
33	2.270	...	...	...	65°		2.590
34	2.225	...	...	...	66		2.550
35	2.180	...	...	...	67		2.515
36	2.135	...	...	...	68		2.480
37	2.090	...	...	...	69		2.450
38	2.045	...	...	...	70		2.415
39	2.000	...	...	...	71		2.385
40	1.965	1.745	2.600	...	72	Not observed.	2.355
41	1.925	1.705	2.560	...	73		2.330
42	1.885	1.665	2.510	...	74		2.305
43	1.850	1.630	2.470	...	75		2.280
44	1.825	1.595	2.430	...	76		2.260
45	...	1.560	2.380	...	77		2.245
46	...	1.525	2.325	...	78		2.230
47	...	1.490	2.295	2.030	79		2.220
48	...	1.460	2.260	1.990			
49	...	1.430	2.220	1.950			
50	...	1.395	2.175	1.910			
51	...	...	2.130	1.875			
52	...	...	...	1.840			
53	...	...	...	1.805			
54	...	...	...	1.770			
55	...	...	...	1.735			
56	...	...	...	1.700			
57	...	...	...	1.665			
58	...	...	...	1.630			
59	...	...	...	1.600			
60	...	...	...	1.575			

TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, 1 27; NEEDLE B. 1872-74.

Angle.	North Deflectors.			South Deflectors.			Angle.	N. and S. Deflectors.	
	Kew (1). 30.x.72.	C. G. Hope. 20.xi.73.	H. Kong. 7.xii.74.	Kew (1). 30.x.72.	C. G. Hope. 20.xi.73.	H. Kong. 7.xii.74.		C. G. Hope. 30.xi.73.	H. Kong. 7.xii.74.
28°	Grains. ...	Grains. 2·200	Grains. 2·120	Grains. ...	Grains. ...	Grains. 3·053	49°	Grains. 3·384	Grains. 3·350
29	...	2·165	2·090	...	...	3·010	50	3·313	3·300
30	...	2·128	2·060	...	...	2·960	51	3·255	3·250
31	...	2·092	2·030	...	...	2·910	52	3·199	3·200
32	...	2·050	2·000	...	...	2·860	53	3·135	3·150
33	...	1·998	1·965	...	...	2·810	54	3·075	3·092
34	...	1·950	1·930	...	...	2·755	55	3·012	3·034
35	2·070	1·900	1·892	2·900	2·702	2·700	56	2·953	2·976
36	2·020	1·850	1·854	2·840	2·650	2·645	57	2·900	2·918
37	1·970	1·810	1·816	2·780	2·598	2·595	58	2·845	2·860
38	1·920	1·770	1·778	2·720	2·535	2·535	59	2·788	2·802
39	1·870	1·730	1·740	2·655	2·477	2·475	60	2·737	2·745
40	1·835	1·690	1·702	2·590	2·420	2·415	61	2·680	2·690
41	1·790	1·655	1·664	2·530	2·368	2·360	62	2·630	2·635
42	1·745	...	1·626	2·475	2·308	2·305	63	2·580	2·585
43	1·715	...	1·588	2·420	2·250	2·255	64	2·532	2·540
44	1·675	...	1·550	2·370	2·200	2·205	65	2·480	2·500
45	1·640	...	1·512	2·325	2·150	2·155	66	...	2·460
46	1·605	...	1·475	2·280	2·100	...	67	...	2·425
47	1·570	...	1·438	2·235	2·050	...	68	...	2·390
48	1·537	...	1·401	2·190	2·000	...	69	...	2·355
49	1·505	...	1·364	2·150	1·953	...	70	...	2·325
50	1·475	...	1·327	2·110	...	...			

TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, C 13; NEEDLE A. 1873-76.

Angle.	North Deflector.					South Deflector.				
	Kew (1). 4.VII.73.	C. G. Hope. 20.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.	Kew (1). 4.VII.73.	C. G. Hope. 20.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.
	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.
20	2.015	...	1.605	1.475	1.415	2.415	...	1.770	1.645	1.625
21	2.030	...	1.612	1.478	1.415	2.160	...	1.780	1.645	1.637
22	2.040	...	1.620	1.480	1.415	2.175	...	1.780	1.645	1.650
23	2.045	...	1.620	1.475	1.405	2.175	...	1.775	1.645	1.650
24	2.045	...	1.615	1.470	1.405	2.175	...	1.765	1.640	1.650
25	2.035	1.865	1.605	1.460	1.400	2.170	1.980	1.755	1.635	1.645
26	2.030	1.850	1.595	1.450	1.395	2.155	1.965	1.745	1.625	1.625
27	2.015	1.835	1.585	1.440	1.390	2.140	1.950	1.735	1.600	1.595
28	2.000	1.815	1.575	1.428	1.380	2.120	1.930	1.718	1.580	1.570
29	1.980	1.795	1.560	1.415	1.368	2.100	1.910	1.698	1.563	1.544
30	1.960	1.775	1.540	1.400	1.355	2.070	1.890	1.675	1.545	1.518
31	1.940	1.750	1.520	1.385	1.342	2.045	1.865	1.652	1.525	1.493
32	1.920	1.725	1.500	1.367	1.330	2.010	1.840	1.629	1.500	1.468
33	1.895	1.700	1.475	1.349	1.310	1.975	1.815	1.605	1.475	1.443
34	1.875	1.675	1.450	1.330	1.292	1.940	1.790	1.580	1.450	1.419
35	1.850	1.650	1.425	1.310	1.272	1.910	1.765	1.554	1.425	1.395
36	1.825	1.620	1.400	1.290	1.250	1.880	1.735	1.528	1.400	1.371
37	1.800	1.590	1.373	1.270	1.228	1.840	1.705	1.500	1.375	1.347
38	1.775	1.560	1.345	1.250	1.206	1.815	1.675	1.470	1.350	1.323
39	1.745	1.535	1.325	1.230	1.184	1.780	1.650	1.440	1.325	1.300
40	1.720	1.505	1.300	1.210	1.162	1.750	1.620	1.410	1.300	1.277

Angle.	North and South Deflectors.			
	C. G. Hope. 20.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.
	Grains.	Grains.	Grains.	Grains.
40°	3.075	2.755	2.495	2.430
41	3.010	2.705	2.450	2.380
42	2.945	2.655	2.407	2.330
43	2.885	2.600	2.365	2.284
44	2.825	2.550	2.322	2.238
45	2.765	2.500	2.280	2.192
46	2.705	2.450	2.240	2.146
47	2.650	2.400	2.200	2.100
48	2.597	2.350	2.160	2.060
49	2.545	2.300	2.120	2.020
50	2.495	2.250	2.080	1.980
51	2.445	2.200	2.040	1.940
52	2.395	2.152	2.002	1.900
53	2.345	2.107	1.964	1.860
54	2.297	2.067	1.926	1.826
55	2.250	2.030	1.888	1.789
56	2.205	1.995	1.850	1.740
57	2.162	1.960	1.813	1.700
58	2.120	1.925	1.776	1.665
59	2.080	1.890	1.738	1.640
60	2.045	1.855	1.700	1.625

TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, C 13; NEEDLE B. 1873-76.

Angle.	North Deflector.					South Deflector.				
	Kew (1). 4.VII.73.	C. G. Hope. 29.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.	Kew (1). 4.VII.73.	C. G. Hope. 29.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.
	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.	Grains.
20°	2.000	1.850	1.558	1.465	1.380	2.150	2.030	1.722	1.610	1.540
21	2.015	1.850	1.558	1.463	1.390	2.175	2.020	1.725	1.610	1.550
22	2.020	1.845	1.560	1.460	1.400	2.190	2.010	1.725	1.610	1.560
23	2.015	1.835	1.560	1.455	1.400	2.200	2.000	1.725	1.605	1.565
24	2.010	1.825	1.555	1.450	1.400	2.200	1.990	1.720	1.598	1.565
25	2.000	1.810	1.550	1.440	1.390	2.200	1.975	1.712	1.590	1.560
26	1.980	1.795	1.545	1.430	1.378	2.190	1.960	1.700	1.580	1.550
27	1.960	1.777	1.535	1.418	1.366	2.165	1.940	1.688	1.570	1.540
28	1.935	1.760	1.525	1.405	1.353	2.135	1.920	1.675	1.555	1.530
29	1.905	1.742	1.510	1.390	1.340	2.100	1.900	1.660	1.540	1.515
30	1.880	1.725	1.495	1.375	1.325	2.070	1.875	1.638	1.525	1.500
31	1.855	1.705	1.475	1.360	1.305	2.035	1.850	1.620	1.510	1.480
32	1.825	1.685	1.455	1.345	1.295	2.005	1.825	1.593	1.490	1.460
33	1.800	1.662	1.435	1.328	1.275	1.970	1.800	1.572	1.468	1.440
34	1.775	1.640	1.415	1.310	1.250	1.935	1.775	1.544	1.445	1.420
35	1.745	1.615	1.390	1.290	1.230	1.905	1.745	1.517	1.420	1.395
36	1.715	1.590	1.365	1.270	1.210	1.875	1.715	1.490	1.395	1.375
37	1.690	1.565	1.340	1.250	1.190	1.840	1.685	1.464	1.370	1.350
38	1.660	1.535	1.315	1.230	1.170	1.805	1.655	1.437	1.345	1.330
39	1.625	1.505	1.292	1.210	1.150	1.775	1.625	1.410	1.322	1.310
40	1.600	1.475	1.270	1.190	1.130	1.740	1.595	1.385	1.300	1.285

Angle.	North and South Deflectors.			
	C. G. Hope. 29.XI.73.	H. Kong. 7.XII.74.	Stanley. 26.I.76.	Kew (2). 20.VII.76.
40°	Grains. 3.030	Grains. 2.700	Grains. 2.476	Grains. 2.420
41	2.975	2.650	2.432	2.380
42	2.900	2.605	2.388	2.340
43	2.840	2.560	2.344	2.300
44	2.780	2.515	2.300	2.256
45	2.725	2.470	2.257	2.212
46	2.670	2.420	2.214	2.168
47	2.625	2.375	2.170	2.124
48	2.570	2.330	2.127	2.080
49	2.520	2.285	2.084	2.036
50	2.470	2.240	2.042	1.992
51	2.420	2.195	2.000	1.948
52	2.375	2.150	1.962	1.904
53	2.330	2.110	1.924	1.864
54	2.287	2.070	1.886	1.825
55	2.245	2.030	1.848	1.787
56	2.202	1.990	1.810	1.750
57	2.160	1.950	1.773	1.717
58	2.120	1.915	1.736	1.684
59	2.080	1.880	1.700	1.652
60	2.040	1.845	1.665	1.620

TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, C 9; NEEDLE B. 1873-76.

Angle.	North Deflector.		South Deflector.	
	C. G. Hope.	Kew (2).	C. G. Hope.	Kew (2).
	20.XI.73.	20.VII.76.	20.XI.73.	20.VII.76.
	Grains.	Grains.	Grains.	Grains.
30°	1·825	1·810	1·880	1·440
31	1·780	1·760	1·830	1·420
32	1·735	1·720	1·780	1·400
33	1·690	1·680	1·740	1·380
34	1·650	1·640	1·700	1·355
35	1·612	1·600	1·662	1·330
36	1·574	1·565	1·624	1·305
37	1·536	1·530	1·586	1·280
38	1·500	1·495	1·548	1·255
39	1·465	1·460	1·510	1·230
40	1·432	1·425	1·475	1·205
41	1·400	1·390	1·440	1·175
42	1·370	1·355	1·405	1·150
43	1·340	1·320	1·370	1·125
44	1·310	1·285	1·340	1·100
45	1·280	1·250	1·310	1·075

Angle.	North and South Deflectors.	
	C. G. Hope.	Kew (2).
	20.XI.73.	20.VII.76.
	Grains.	Grains.
45°	2·340	2·337
46	2·290	2·280
47	2·240	2·225
48	2·190	2·170
49	2·140	2·120
50	2·090	2·075
51	2·045	2·030
52	2·000	1·990
53	1·960	1·950
54	1·912	1·912
55	1·874	1·875
56	1·836	1·840
57	1·800	1·805
58	1·765	1·770
59	1·735	1·735
60	1·705	1·700

COMPUTED TABLE OF EQUIVALENT WEIGHTS.—FOX CIRCLE, C 9; NEEDLE C.

Angle.	North Deflector.	South Deflector.
	Halifax.	Halifax.
	15.V.73.	15.V.73.
	Grains.	Grains.
32°	2·240	2·160
33	2·190	2·100
34	2·130	2·040
35	2·080	1·985
36	2·030	1·930
37	1·980	1·878
38	1·930	1·823
39	1·890	1·775
40	1·860	1·725
41	1·820	...

Angle.	North & South Deflectors.
	Halifax.
	15.V.73.
	Grains.
49°	2·950
50	2·890
51	2·830
52	2·760
53	2·700
54	2·630
55	2·560
56	2·500
57	2·440
58	2·370

## 6. TOTAL FORCE.—CORRECTION for

TABLE OF CORRECTIONS TO BE APPLIED TO  $\phi'$  FOR DIFFERENT POSITIONS  
OF SHIP'S HEAD.

Date.	Stations.	$\phi$ .	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.
Dec. 5, 1872.	Sheerness.	10.27	+1.10	+1.12	+1.17	+1.28	+1.38	+1.46
Jan. 26, 1873.	Gibraltar.	9.45	+0.80	+0.83	+0.89	+0.99	+1.10	+1.22
Mar. 22, 1873.	St Thomas.	10.19	+0.71	+0.75	+0.87	+1.02	+1.18	+1.31
May 31, 1873.	Bermuda.	12.30	+1.37	+1.40	+1.47	+1.56	+1.65	+1.73
Aug. 29, 1873.	St Paul rocks.	7.00	+0.04	+0.04	+0.22	+0.33	+0.47	+0.61
Sept. 26, 1873.	Bahia.	6.00	-0.29	-0.28	-0.13	-0.04	+0.07	+0.18
Dec. 11, 1873.	Cape of Good Hope.	7.70	-0.98	-0.95	-0.90	-0.81	-0.71	-0.62
Feb. 22, 1874.	63° 30' s., 90° 47' s.	13.75	-0.18	-0.17	-0.15	-0.15	-0.14	-0.13
April 4, 1874.	Montague island.	12.89	-0.25	-0.22	-0.19	-0.24	-0.25	-0.27
Aug. 11, 1874.	Kandavu.	9.76	-0.30	-0.25	-0.20	-0.17	-0.16	-0.18
Oct. 11, 1874.	Amboina.	8.84	-0.30	-0.26	-0.29	-0.20	-0.12	-0.11
Oct. 23, 1874.	Basilan (1).	8.24	-0.23	-0.14	-0.15	-0.01	+0.15	+0.20
Jan. 2, 1875.	Hong Kong.	9.19	+0.20	+0.06	+0.18	+0.32	+0.47	+0.60
Jan. 30, 1875.	Basilan (2).	8.25	-0.36	-0.31	-0.20	-0.04	+0.09	+0.18
April 13, 1875.	Yokohama (1).	9.70	+0.19	+0.24	+0.33	+0.51	+0.68	+0.86
June 6, 1875.	Yokohama (2).	9.70	+0.34	+0.39	+0.45	+0.59	+0.73	+0.84
Aug. 11, 1875.	Honolulu.	8.51	+0.28	+0.31	+0.42	+0.53	+0.68	+0.75
Oct. 3, 1875.	Tahiti.	8.36	-0.46	-0.41	-0.39	-0.33	-0.30	-0.28
Dec. 11, 1875.	Valparaiso.	7.40	-0.48	-0.44	-0.41	-0.34	-0.24	-0.16
Feb. 4, 1876.	Falkland islands.	9.01	-0.58	-0.58	-0.50	-0.44	-0.38	-0.34
April 3, 1876.	Ascension.	6.13	-0.42	-0.39	-0.29	-0.21	-0.08	+0.03
April 19, 1876.	St Vincent.	8.58	+0.37	+0.40	+0.47	+0.57	+0.68	+0.69
June 2, 1876.	Sheerness.	10.27	+0.80	+0.81	+0.81	+0.89	+0.94	+0.98

## DIRECTION OF SHIP'S HEAD.

TABLE—*Continued.*

S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Date.
+1.52	+1.57	+1.58	+1.56	+1.53	+1.46	+1.38	+1.29	+1.17	+1.11	Dec. 5, 1872.
+1.32	+1.33	+1.37	+1.35	+1.26	+1.20	+1.10	+1.00	+0.90	+0.82	Jan. 26, 1873.
+1.36	+1.37	+1.38	+1.37	+1.31	+1.26	+1.18	+1.05	+0.90	+0.76	Mar. 22, 1873.
+1.78	+1.82	+1.83	+1.82	+1.79	+1.73	+1.65	+1.56	+1.46	+1.40	May 31, 1873.
+0.74	+0.74	+0.75	+0.74	+0.62	+0.58	+0.47	+0.32	+0.14	+0.09	Aug. 29, 1873.
+0.29	+0.31	+0.34	+0.31	+0.24	+0.18	+0.07	-0.22	-0.22	-0.23	Sept. 26, 1873.
-0.54	-0.50	-0.48	-0.49	-0.56	-0.62	-0.71	-0.81	-0.89	-0.95	Dec. 11, 1873.
-0.12	-0.11	-0.11	-0.11	-0.12	-0.13	-0.14	-0.15	-0.15	-0.17	Feb. 22, 1874.
-0.28	-0.32	-0.32	-0.31	-0.31	-0.28	-0.25	-0.23	-0.22	-0.23	April 4, 1874.
-0.21	-0.21	-0.21	-0.19	-0.16	-0.15	-0.16	-0.20	-0.26	-0.26	Aug. 11, 1874.
-0.12	-0.11	-0.12	-0.14	-0.12	-0.11	-0.12	-0.14	-0.35	-0.29	Oct. 11, 1874.
+0.18	+0.24	+0.20	+0.24	+0.19	+0.20	+0.15	+0.10	-0.15	-0.28	Oct. 23, 1874.
+0.73	+0.76	+0.80	+0.79	+0.68	+0.60	+0.53	+0.30	+0.15	+0.04	Jan. 2, 1875.
+0.25	+0.28	+0.26	+0.28	+0.21	+0.18	+0.08	-0.04	-0.20	-0.26	Jan. 30, 1875.
+0.99	+1.03	+1.07	+1.05	+0.95	+0.84	+0.70	+0.54	+0.39	+0.33	April 13, 1875.
+0.94	+0.95	+0.98	+0.97	+0.88	+0.82	+0.74	+0.61	+0.48	+0.38	June 6, 1875.
+0.89	+0.82	+0.82	+0.81	+0.79	+0.74	+0.68	+0.55	+0.42	+0.32	Aug. 11, 1875.
-0.29	-0.32	-0.33	-0.32	-0.30	-0.29	-0.29	-0.32	-0.39	-0.34	Oct. 3, 1875.
-0.11	-0.10	-0.09	-0.09	-0.15	-0.19	-0.25	-0.31	-0.38	-0.47	Dec. 11, 1875.
-0.32	-0.26	-0.25	-0.26	-0.33	-0.35	-0.38	-0.42	-0.44	-0.58	Feb. 4, 1876.
+0.11	+0.13	+0.14	+0.14	+0.06	0.00	-0.08	-0.20	-0.31	-0.37	April 3, 1876.
+0.79	+0.82	+0.82	+0.82	+0.78	+0.68	+0.68	+0.52	+0.48	+0.33	April 19, 1876.
+1.03	+1.03	+1.04	+1.04	+1.01	+0.98	+0.91	+0.89	+0.84	+0.81	June 2, 1876.

## 7.—ABSTRACT of the CONSTANTS of

HORIZONTAL COMPONENT.								
Date.	Geographical Position.	Standard Position.			Fox Position.			
		P.	c.	Q.	P.	c.	Q.	A'.
1873.	From England to Bahia.	+ '071	+ '015	- '005	+ '085	+ '0055	- '009	1'012
	At Tristan d'Acunha.	+ '059	+ '015	- '005	+ '081	+ '005	- '008	...
	At Cape of Good Hope.	+ '056	+ '015	- '005	+ '071	+ '0015	- '006	'998
1874.	In Lat. 63° 30' s. Long. 89° E.	+ '037	+ '015	- '002	+ '055	+ '0036	- '006	1'007
	From Montague I., N. S. W., to Basilan strait, Philip- pine Is.	+ '008	+ '015	- '002	+ '055	+ '0036	- '006	1'007
1875.	From Hong Kong to Val- paraiso.	+ '032	+ '015	+ '001	+ '078	+ '014	...	1'005
1876.	At Falkland islands.	+ '026	+ '015	+ '006	+ '071	+ '010	...	'997
	From Monte Video to Sheer- ness.	+ '026	+ '015	+ '006	+ '065	+ '006	...	'996

The notation on this page is that of the "Admiralty Manual" for deviations of the compass, 4th ed. 1874, with the exception of A', for which see Magnetical Instructions.

The horizontal component of the ship's magnetic force proceeding from sub-permanent magnetism is denoted by the constant parameters P and Q; P the force towards the bow; Q the force towards the starboard side.

That part of the horizontal component proceeding from transient induction in vertical iron is represented by the constants  $c$  and  $f$ ;  $c$  the force towards the bow;  $f$  towards the starboard side.  $f$  has no appreciable value in the Challenger, and is therefore not quoted in this table.

These constants are expressed in terms of the earth's horizontal force at Kew Observatory = 1.0.

## the SHIP'S MAGNETIC FORCE.

VERTICAL COMPONENT.—FOX POSITION.

Date.	Geographical Position.	R.	<i>d</i> .	
December 1872 to July 1873, {	North Atlantic.	-320	97	+015
August 5, "	St Vincent.	-320	97	+013
September 2, "	Fernando Noronha.	-337	97	-016
October 28, "	Cape of Good Hope.	-336	97	-016
December 12, "		-335	93	-022
February 22, 1874,	Lat. 63° 30' S. Long. 90° 47' E.	-264	93	-022
April 5, "	Montague Island.	-212	93	-022
June 14, "	Sydney.	-194	93	-022
August 19, "	Kandavu.	-176	94	+014
October 4, "	Amboina.	-147	95	+012
October 23, "	Basilan (1).	-139	96	+007
November 16, "	Hong Kong.	-149	96	+007
December 29, "		-163	96	+016
January 30, 1875,	Basilan (2).	-208	97	+004
April 13, "	Yokohama.	-208	98	+036
August 11, "	Honolulu.	-211	99	-003
October 3, "	Tahiti.	-220	97	+022
February 4, 1876,	Falkland Islands.	-190	96	-006
April 3, "	Ascension.	-187	97	+006
April 13, "	St Vincent.	-188	97	-005
June 2, "	Sheerness.	-201	97	-002

The vertical component of the ship's magnetic force proceeding from sub-permanent magnetism is denoted by the constant parameter  $R$ ; that part of it proceeding from transient induction in soft iron by  $d$ .

The vertical force is further affected by horizontal induction in horizontal soft iron, giving it a different value according as the ship's head is north or south. This induced force is represented by the constant  $c$ .

In the notation of the "Admiralty Manual" for deviations of the Compass—

$$d = \frac{1+k}{1+a} \quad c = \frac{g}{1+a} \quad A' = 1 + a.$$

The constants  $R$  and  $d$ , are expressed in terms of the horizontal force at Kew Observatory = 1.0.

I.—MEMORANDUM on the METEOROLOGICAL OBSERVATIONS made during the Voyage of H.M.S. Challenger, 1872-76, prepared by Staff-Commander T. H. TIZARD, R.N., under the direction of Captain F. J. EVANS, C.B., F.R.S., Hydrographer.

The following Tables give in detail the meteorological observations taken on board H.M.S. Challenger throughout the voyage, the instruments (with their necessary corrections) having been furnished by the Meteorological Department of the Board of Trade.

The observations were uniformly made at two-hourly intervals by the officer of the watch, excepting at the hours of 6 A.M. and 6 P.M., when the instruments were recorded by the Staff-Commander.

From the 21st December 1873 to the 17th March 1874, the ship being then in the southern part of the Indian Ocean, and for some days in the immediate neighbourhood of the Antarctic Circle, hourly observations were made.

BAROMETER.—The barometer was suspended on the main deck, just outside the captain's cabin, the cistern being  $9\frac{1}{2}$  feet above the level of the sea. The same instrument was used throughout the voyage. It was compared with the standard at Kew Observatory before leaving, and on the return of the ship to England; (also with the standard instruments in the observatories at the Cape of Good Hope and at Sydney, N.S.W.) its error remained constant throughout the voyage.

The original readings have been corrected for this instrumental error and for capillarity. They have been further reduced to a temperature of  $32^{\circ}$  Fahr. and sea-level. No correction has been made for errors of observation. It appeared to us to be better to leave such errors to be dealt with by meteorologists, and thus to avoid the risk, in attempting to harmonise them, of losing an element by which the general value of the record might be estimated.

WIND.—In accordance with the general custom on board ship the *compass* direction of the wind was recorded at the time of observation: in the following tables its direction has been referred to the *true meridian*.

In describing the force of the wind and state of the weather the notation, as follows, proposed by the late Admiral Sir Francis Beaufort, and now generally adopted, has been employed.

## FIGURES TO DENOTE THE FORCE OF THE WIND.

0	denotes	Calm.		
1	„	Light air.....	just sufficient to give	Stearage way.
2	„	Light breeze....	with which a well conditioned man-of-war, under all sail, and clean full, would go in smooth water, from .....	1 to 2 knots.
3	„	Gentle breeze...		3 to 4 knots.
4	„	Moderate breeze		5 to 6 knots.
5	„	Fresh breeze.....	in which the same ship could just carry close hauled. ....	Royals, &c.
6	„	Strong breeze....		Single reefs and topgallant sails.
7	„	Moderate gale....		Double-reefs, jib, &c.
8	„	Fresh gale.....	with which she could only bear. . . . .	Triple-reefs, courses, &c.
9	„	Strong gale.....		Close-reefs, and courses.
10	„	Whole gale.....	with which she could only bear. . . . .	Close-reefed maintopsail and reefed foresail.
11	„	Storm .....	with which she would be reduced to	Storm staysails.
12	„	Hurricane .....	to which she could show .....	No canvas.

NOTE.—Exception has been taken by seamen to the numbers denoting the force of the wind in this scale, as represented by modern types of ships. They were, however, found to be well adapted to H.M.S. Challenger.

## LETTERS TO DENOTE THE STATE OF THE WEATHER.

b	denotes	Blue sky, whether with clear or hazy atmosphere.
c	„	Cloudy— <i>i.e.</i> , Detached opening clouds.
d	„	Drizzling rain.
f	„	Fog—f Thick fog.
g	„	Gloomy dark weather.
h	„	Hail.
l	„	Lightning.
m	„	Misty or hazy—so as to interrupt the view.
o	„	Overcast— <i>i.e.</i> , The whole sky covered with one impervious cloud.
p	„	Passing showers.
q	„	Squally.
r	„	Rain— <i>i.e.</i> , Continuous rain.
s	„	Snow.
t	„	Thunder.
u	„	Ugly threatening appearance of the weather.
v	„	Visibility of distant objects—whether the sky be cloudy or not.
w	„	Wet dew.
*	.....	Under any letter denotes an extraordinary degree.

By the combination of these letters all the ordinary phenomena of the weather may be recorded with certainty and brevity.

## EXAMPLES.

b c m Blue sky, with detached opening clouds, but hazy round the horizon.

g v Gloomy dark weather, but distant objects *remakably* visible.

q p d l t Very hard squalls, and showers of drizzle, accompanied by lightning, with *very* heavy thunder.

TEMPERATURE.—The dry and wet bulb thermometers were, in the early part of the voyage, suspended in the small screen provided by the Meteorological Department, which was fastened to the after upright of the steering wheel, under the pilotage bridge. As this screen was too small to contain a maximum and minimum thermometer in addition to the wet and dry bulb instruments, a larger one was constructed and placed against the ship's side, under the shade of the pilotage bridge. The thermometers were suspended in it on the 17th April 1873. The thermometers were separated from the ship's side by wooden battens about three inches in thickness. The maximum and minimum thermometers were suspended from the same battens. The instruments in use were occasionally tested for error of zero points (in melting ice) and also compared with a standard thermometer by Geisler. Their indications were seldom in error to the extent of  $0^{\circ}.3$ .

HUMIDITY.—The relative humidity has been deduced from the Hygrometrical tables of J. Glaisher, Esq., F.R.S., 6th edition.

SEA-SURFACE.—The temperature of the sea-surface was obtained by drawing a bucket of water from over the side of the ship, and immersing a thermometer in it. Care was taken that this water should be obtained from a position sufficiently far forward to be clear of the discharge-pipes from the engines, &c.

When in the region of ocean stream currents the temperature of the surface water was taken at hourly, or half-hourly intervals. In the tables, to avoid crowding the figures, the highest or lowest reading for the two-hourly intervals only is given.

CLOUDS.—The amount registered was in all cases estimated, 10 indicating a sky completely overcast, and 0 a clear sky; the description of cloud is that issued by the Meteorological department of the Board of Trade, and illustrated in the accompanying plate.

#### UPPER CLOUDS.

Fig. 1. *Cirrus*.—This is the very lofty cloud which looks like hair, thread, or feathers, and is often called "Mare's tails." It frequently moves in a direction different from that of the wind at the earth's surface.

Fig. 2. *Cirro-cumulus*.—This is also a high cloud; it differs from the cirrus in being more globular in form, as it consists generally of small detached rounded masses, like a flock of sheep lying down, or like the markings on a mackerel, whence the name "Mackerel Sky." It is sometimes seen at lower levels, when it may be difficult to distinguish it from small cumuli.

Fig. 3. *Cirro-stratus*.—This resembles the stratus in being a sheet or layer of uniform thickness, but it belongs to the higher regions of the atmosphere.

Whenever there is a doubt the observer had best enter the cloud either as "high

str." or "low cir.-s." It often happens that the observer looks upon the edge of a layer of stratus or cirro-stratus, which appears like a straight line, as in the case of the horizontal bands across the cumulo-stratus.

The distinction between stratus and cirro-stratus seems to depend on the relative levels above the earth's surface at which they are observed. Clouds are seen at all levels between the highest cirrus and the lowest stratus, so that it is often difficult to determine whether a particular sheet or layer of cloud is a high stratus or a low cirro-stratus.

The same remark is applicable to cir.-c. and the smaller forms of cumulus, for there is a stage in which they seem, as it were, to run into each other.

### LOWER CLOUDS.

Fig. 4. *Stratus*.—This is a sheet or layer of cloud, of uniform thickness. It has but little variety of light and shade, and belongs to the lower regions of the atmosphere, so much so that Luke Howard speaks of it as "Ground Fog," the cloudy formation which spreads over low grounds in the evening. All low detached clouds, which look like a piece of lifted fog, and are not in any way consolidated into a definite form, are strati, and may be called "detached" stratus.

When a stratus is at a high level, it may pass into a cirro-stratus.

Figs. 5 and 6. *Cumulus*.—This class of clouds comprises all those which have a globular or rounded form, from the small white cloud represented in fig. 5, to the heavy mass represented in fig. 6, which is almost a cumulo-stratus. The cumulus sometimes takes a cylindrical shape, forming itself into long horizontal rolls, between which gleams of light are seen, but which are often so closely packed as to hide the blue sky. These are called by us Roll-cumulus. (See fig. 5.)

Fig. 7. *Cumulo-stratus*.—This is the cumulus, as it were, changing into a nimbus. It is dark and flat at its base, and is traversed by horizontal lines of dark cloud.

Fig. 8. *Nimbus*.—This is the rain-cloud. Whilst on the horizon, or as it advances towards the observer, its front frequently presents a marked outline like that of a very heavy cumulus-stratus with rain falling from it, and with some cirrus above, so that Howard has called it the cumulo-cirro-stratus. When it has overspread the whole sky, it is usually so mixed up with, or concealed by, the falling rain, that it generally assumes an uniform dark appearance.

Fig. 8 represents a nimbus before it has overspread the sky; there are also smaller clouds of the same kind which produce a passing shower. They are easily distinguished by the fact that rain or snow, &c., is falling from them.

It is believed that the foregoing description is sufficient to explain the ordinary forms of clouds, but the appearances are often very much intermixed. Thus, before rain we

often see a dirty background of cirro-stratus, over which black patches of cirro-cumulus are travelling. Such combinations may be noted in the column for "Remarks."

CURRENT.—The direction and rate of the current, given in these tables, is derived from the differences in the position of the ship at noon, determined by astronomical observation, and that determined by courses steered and distances run (by patent log) from the astronomical position of the preceding noon. Specific observations on the direction and rate of the surface currents were frequently made during the voyage, either from a boat fast to the trawl rope, or when the ship was kept stationary for sounding purposes; occasionally by comparing the distances shown by patent log with the distances made good over the ground as ascertained by objects on shore. These several results, independent of the ship's reckoning, are given in the text of the voyage.

It has been contended that the difference in a day's run between the position of the ship by dead reckoning and by astronomical observation cannot be considered as giving with sufficient accuracy the movements of the surface waters. The long experience of navigators prove, however, that with due care this result furnishes a fair approximation to the truth, and especially so if the astronomical observations are taken at frequent intervals during the twenty-four hours. Much care was taken in the "Challenger" by due attention to the steerage and estimation of the leeway to keep an accurate reckoning, and also to ascertain frequently the latitude and longitude by astronomical observation. The surface set deduced by these means, was found in the majority of cases to be continuous during the day, and to agree in a striking manner with the surface current as found by anchoring a boat, or other direct method.

SPECIFIC GRAVITY OF SEA WATER.—The specific gravity of the sea water during the voyage was ascertained by Mr Buchanan, the analytical chemist of the expedition, with a very delicate hydrometer designed by him for this purpose. (A description of this instrument is given in Vol. I.) The results are reduced to the temperature of 60° Fahr. by the tables and curves given in Maury's "Sailing Directions," 8th edition, p. 239 *et seq.*, and Appendix, Plate XVIII.

# II.—METEOROLOGICAL OBSERVATIONS made during the Voyage of H.M.S. Challenger, 1872-76.

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## SUNDAY, 1st DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Balls.	Damp Balls.					Upper.	Lower.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	S.E.	5	ocqr	...	29.925	48.3	47.3	93	...	10	...	Nimb.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	S.E.S.	4	bcq	...	29.916	46.8	46.8	100	...	5	Cir.	Cum.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	S.E.	3	bcq	...	29.112	49.3	48.3	93	...	5	...	Cum.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	
4.	S.	3	bc	...	29.199	47.8	46.8	93	...	7	...	Cum.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	S.S.E.	1	bc	...	29.388	46.3	45.8	97	...	1	...	Cum.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Midd.	S.S.E.	1	b	...	29.388	45.8	44.8	93	...	0	...	...	...	
Totals.	...	17	bcq bc	...	1058	44.3	39.8	569	...	28	...	Cir.	Cum	
Mean.	S.S.E.	3		...	29.176	47.4	46.6	95	...	5	...			

## MONDAY, 2d.

2.	...	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	...	...	...	...	...	...	...	...	...	...	...	...	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	E.N.E.	3	bc	...	29.564	45.8	45.8	100	...	2	Cir.	Cum.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	E.N.E.	3	bc	...	29.544	48.8	47.8	93	...	4	Cir.	Cum.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	
4.	E.N.E.	3	c	...	29.453	48.3	46.8	90	...	10	...	Cum.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	E.N.E.	5	cp	...	29.474	47.8	46.8	93	...	10	...	Cum.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Midd.	E.N.E.	5	c	...	29.418	46.8	45.8	93	...	10	...	Nimb.	...	
Totals.	...	19	bcp bc cp	...	2453	37.5	33.0	469	...	36	...	Cir	Cum. & Nimb.	
Mean.	E.N.E.	4		...	29.491	47.5	46.6	94	...	7	...			

## TUESDAY, 3d.

2.	...	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	S.N.E.	6	ocqr	...	29.389	46.3	45.8	97	...	10	...	Nimb.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	S.N.E.	6	ocqr	...	29.389	46.3	45.8	97	...	10	...	Nimb.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	S.	6	ocqr	...	29.418	45.8	44.8	93	...	10	...	Nimb.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	
4.	S.N.E.	5	ocqr	...	29.466	45.8	45.8	100	...	10	...	Nimb.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	...	
8.	S.N.W.	...	ocqr	...	29.449	44.8	43.8	92	...	10	...	Nimb.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Midd.	S.W.	4	ocqr	...	29.494	43.3	42.8	96	...	10	...	Nimb.	...	
Totals.	...	27	ocqr	...	2605	32.3	28.8	575	...	60	...	...	Nimb.	
Mean.	S.	5		...	29.434	45.4	44.8	96	...	10	...			

## WEDNESDAY, 4TH DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	N. W.	5	bc	...	29.597	43.3	41.8	88	...	6	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	W. N. W.	5	bc	...	29.663	40.8	39.8	92	...	2	...	Cum str.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	N.	5	bc	...	29.720	42.8	41.8	92	...	2	Cir str.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	N. N. W.	6	bc	...	29.843	39.8	38.8	92	...	1	Str.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	W. N. W.	5	bc	...	29.863	36.8	36.8	100	...	1	Str.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Midlt.	N. W.	4	bc	...	29.888	35.8	34.8	91	...	1	Str.	...	
Totals.	...	39	bc	...	4574	239.3	53.8	555	...	13	Cir str.	Cum.	
Mean.	N. W.	5		...	29.762	39.9	39.0	92	...	2			

## THURSDAY, 5TH.

2.	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	w.	2	bc	...	29.968	34.8	33.8	90	...	1	...	Str.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	wbs.	3	bm	...	29.993	31.8	30.8	86	...	0	...	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	s.	2	bm	...	29.971	37.8	35.8	82	...	1	Cir.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	s.	4	bc	...	29.858	45.8	44.8	93	...	6	Cir.	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	s,s,w.	5	cr	...	29.716	47.8	46.8	93	...	10	...	Nimb.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Midd.	s,s,w.	6	ocqr	...	29.497	44.8	43.8	92	...	10	...	Nimb.	
Totals.	...	22	bc & ocqr	...	5003	2.8	235.8	536	...	28	Cir.	Cum str. & Nimb.	
Mean.	swbs.	4		...	29.834	40.5	39.3	89	...	5			

## FRIDAY, 6TH.

2.	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4.	s.s.w.	3	oc	...	29.434	46.8	45.8	93	...	10	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	sw <sup>bs</sup> .	4	bc	...	29.464	44.8	43.8	93	...	3	Cir.	Str.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	w.s.w.	4	bc	...	29.500	47.8	45.8	87	...	1	Cir.	Str.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	sw <sup>bs</sup> .	2	c	...	29.450	44.8	44.8	100	...	10	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Midd.	s <sup>se</sup> .	2	ocp	...	29.367	45.8	44.8	93	...	10	...	Nimb.	
Totals.	...	15	bc ocp	...	2215	30.0	25.0	16	...	34	Cir.	Cum str. & Nimb.	
Mean.	s.s.w.	3		...	29.443	46.0	45.0	93	...	7			

## SATURDAY, 7TH DECEMBER 1872.

Hour.	Wind.		Weather	State of Sea, 6 to 9	Barometer (re- duced to Sea Level)	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2	...	...	...	...	...	...	...	...	...	...	...	...	At noon, at Sheerness.
4	...	...	...	...	...	...	...	...	...	...	...	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	
8	w.s.w.	3	bcm	...	29.358	40.8	40.3	96	...	6	Cir.	Cum.	11 A.M., left Sheerness for Portsmouth.
10	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	...	...	...	...	...	...	...	...	...	...	...	...	
2	...	...	...	...	...	...	...	...	...	...	...	...	6 P.M., anchored under Dungeness.
4	s.w.	5	bcm	...	29.547	47.8	45.8	86	...	5	Str.	Cir cum.	
6	...	...	...	...	...	...	...	...	...	...	...	...	
8	w.s.	4	bcm	...	29.535	48.8	47.8	93	...	6	Cir.	Cir cum.	
10	...	...	...	...	...	...	...	...	...	...	...	...	
Midlt.	w.	4	bc	...	29.584	44.8	43.8	92	...	2	...	Str.	
Totals.	...	16	...	...	2024	22.2	17.7	7	...	19	Cir. str.	Cir cum. & Str.	
Mean.	w.s.	4	...	...	29.566	45.5	44.4	92	...	5	...	...	

## SUNDAY, 8TH.

2	...	...	...	...	...	...	...	...	...	...	...	...	At noon, lat. 50° 41' N. long. 0° 41' E. 4 A.M., left anchorage under Dungeness.
4	w.s.w.	4	bc	0	29.534	44.8	43.8	92	...	1	Cir.	...	
6	...	...	...	...	...	...	...	...	...	...	...	...	
8	w.	5	bc	0	29.628	47.8	45.8	86	...	1	Cir.	...	At noon the wind began to freshen, and backed to s.w. At 4 P.M. lay-to off Beachy Head under fore and aft sails. Strong wind and high sea.
10	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	w.	6.7	bc	3	29.610	50.8	48.8	86	...	6	Cir cum.	Cum.	
2	swbs.	5	oc	...	29.526	48.8	48.8	93	...	5	Cir.	Cum.	
4	s.s.w.	6	bc	...	29.398	50.3	49.3	93	...	8	Cir.	Cir cum.	
6	s.s.w.	9	ocqr	5	29.115	...	...	...	...	9	...	Cum.	
8	w.s.w.	9	ocqr	5	29.085	51.8	49.8	86	...	9	...	Cum.	
10	s.s.w.	9	ocqr	6	29.055	48.8	46.8	86	...	9	...	Cum.	
Midlt.	s.w.	9	ocqpl	6	29.077	46.8	45.8	93	...	9	...	Nimb.	
Totals.	...	62	bc & ocqpl	25	3028	69.9	58.9	75	...	57	Cir cum.	Cum.	
Mean.	s.w.	7	...	5	29.336	48.7	47.4	89	...	6	...	...	

## MONDAY, 9TH.

2	w.s.w.	9	feqpl	8	29.005	47.8	46.8	93	...	7	Cir.	Cum.	At noon, lat. 51° 5' N. long. 1° 29' E.
4	w.s.w.	10	cpql	8	29.003	47.8	46.8	93	...	7	...	Cum.	
6	w.s.w.	9	cpql	8	29.013	47.3	46.8	97	...	7	...	Cum.	
8	w.s.w.	10	cpql	8	29.041	47.8	45.8	86	...	9	...	Cum.	7 A.M., bore up for the Downs. 9.40 P.M., anchored in Downs.
10	w.s.w.	8	bql	7	29.120	47.8	45.3	82	...	6	...	Cum.	
Noon.	w.	6	bc	3	29.133	47.8	45.3	82	...	7	Cir.	Cir cum.	
2	w.s.	6	bc	...	29.120	47.8	45.8	86	...	6	Cir.	Str. cum.	
4	w.s.	5	bc	...	29.137	45.8	43.8	86	...	3	...	Cum str.	
6	s.w.	4	bcl	...	29.126	43.8	42.8	92	...	3	...	Cum str.	
8	s.w.	3	bc	...	29.159	43.8	42.8	92	...	3	...	Cum.	
10	sw.w.	3	bc	...	29.189	41.8	40.8	92	...	2	...	Cum.	
Midlt.	w.	4	bc	...	29.189	42.8	40.8	84	...	1	Cir.	...	
Totals.	...	77	cpql & bc	42	1235	72.1	53.6	1065	...	61	Cir.	Cum. & Cum str.	
Mean.	w.s.w.	6	...	7	29.103	46.0	44.5	89	...	5	...	...	

## TUESDAY, 10TH DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W.	3	bc	...	29.213	42.8	41.8	92	...	3	Cir.	Cum str.	At noon, lat. 50° 51' N. long. 0° 59' E.
4.	W.	4	bc	...	29.216	41.8	39.8	85	...	4	Cir.	Cum.	
6.	W.	3	bc	...	29.201	40.8	39.8	92	...	3	...	Cum.	
8.	W.	2	bc	...	29.171	43.3	42.8	96	...	3	Cir.	Cum.	7.45 A.M., left the Downs for Portsmouth.
10.	S.	5	ocyp	3	29.126	43.3	42.3	92	...	9	...	Str.	
Noon.	S.	5	ocyp	3	29.055	43.8	42.8	92	...	10	Cum.	Cum.	
2.	E.S.E.	5	ocyp	3	28.840	40.8	40.3	96	...	10	...	Cum.	At noon the barometer began to fall rapidly, the wind backing to E. and N.E. and then to S.W. At 7 P.M. the barometer reached its lowest point; the wind settled from the S.W., and then the pressure increased.
4.	N.N.E.	8	ocps	5	28.646	39.3	38.8	96	...	10	...	Cum.	
6.	N.N.E.	9	ocyp	5	28.589	38.8	37.8	92	...	10	...	Cum.	
8.	N.N.W.	8	ocyp	6	28.679	42.8	41.8	92	...	10	...	Cum.	
10.	N.W.	7	ocyp	6	28.993	43.8	42.8	92	...	8	...	Cum.	
Midt.	N.W.	6	bcy	5	29.033	42.8	41.8	92	...	5	...	Cum.	
Totals.	...	65	bc ocps	36	11672	24.1	12.6	29	...	85	Cir.	Cum.	
Mean.	Variable.	5		4	28.973	42.0	41.0	92	...	7			

## WEDNESDAY, 11TH.

2.	N.W.	5	oc	3	29.103	42.8	41.3	88	...	10	...	Nimb.	At noon, at Portsmouth.
4.	N.W.	2	cm	1	29.162	42.3	40.8	88	...	9	...	Cum.	
6.	N.W.	2	ocm	1	29.213	42.3	40.8	88	...	9	...	Cum.	
8.	N.W.	4	ocm	1	29.307	39.8	39.8	100	...	9	...	Cum.	11.30 A.M., arrived and anchored at Spithead.
10.	N.	3	ocupa	1	29.376	40.8	40.3	96	...	5	...	Cum.	
Noon.	N.N.W.	2	bc	1	29.447	41.8	40.8	92	...	4	...	Cum.	
2.	N.N.W.	2	bc	...	29.527	41.8	39.8	85	...	2	...	Cum.	At 2 P.M. proceeded into Portsmouth harbour.
4.	N.N.W.	1	bc	...	29.582	42.8	39.8	78	...	2	...	Cum.	
6.	N.N.W.	1	bc	...	29.645	39.8	38.3	87	...	1	...	Cum.	
8.	N.N.W.	1	bc	...	29.738	37.8	36.8	91	...	1	...	Cum.	
10.	N.N.W.	1	bc	...	29.777	36.8	35.8	91	...	1	...	Cum.	
Midt.	N.W.	2	bc	...	29.840	35.8	34.8	91	...	1	...	Cum.	
Totals.	...	26	ocmp & bc	8	5717	4.6	109.1	1075	...	54	...	Cum.	
Mean.	NW by N.	2		1	29.476	40.4	39.1	89	...	4			

## THURSDAY, 12TH.

2.	Calm.	0	bc	...	29.896	40.3	38.8	88	...	0	...	...	At noon, at Portsmouth.
4.	Calm.	0	bc	...	29.906	44.3	43.8	96	...	0	...	...	
6.	Calm.	0	bc	...	29.966	29.8	29.3	91	...	2	Cir.	...	
8.	Calm.	0	bc	...	29.999	32.8	31.8	89	...	2	Cir.	...	...
10.	Calm.	0	bc	...	30.026	35.8	34.8	91	...	4	Cir.	Cir cum.	
Noon.	Calm.	0	bc	...	30.016	38.3	36.8	88	...	2	Cir.	Cir cum.	
2.	Calm.	0	bc	...	30.031	38.8	37.8	92	...	6	...	Cum.	...
4.	Calm.	0	bc	...	30.031	39.8	37.8	84	...	6	...	Cum.	
6.	Calm.	0	oc	...	30.038	40.8	38.8	84	...	5	...	Cum.	
8.	Calm.	0	oc	...	30.065	41.8	39.8	85	...	5	...	Cum.	
10.	S.S.W.	1	oc	...	30.007	41.8	40.8	92	...	5	...	Cum.	
Midt.	S.S.W.	1	oc	...	29.977	41.3	40.8	96	...	5	...	Cum.	
Totals.	...	...	bc & oc	...	11898	465.6	451.1	1076	...	42	Cir.	Cum.	
Mean.	Calm.	0.1		...	29.991	37.9	37.6	89	...	3			

## FRIDAY, 13TH DECEMBER 1872.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.	Upper.				Lower.		
2.	Calm.	0	oer	...	29.890	42.8	41.8	92	...	10	...	Cum.	At Portsmouth	
4.	Calm.	0	oer	...	29.910	42.8	41.8	92	...	10	...	Cum.		
6.	Calm.	0	oe	...	29.910	42.3	40.8	88	...	10	...	Cum.		
8.	s.s.w.	1	oer	...	29.865	44.3	42.8	88	...	10	...	Cum.		
10.	s.s.w.	4	oer	...	29.785	46.3	46.3	100	...	10	...	Cum.		
Noon.	s.s.w.	4	oer	...	29.775	46.8	46.3	97	...	10	...	Cum.		
2.	s.s.w.	1	oer	...	29.726	48.8	47.8	93	...	10	...	Cum.		
4.	s.s.w.	1	oer	...	29.717	48.8	47.8	93	...	10	...	Cum.		
6.	w.s.w.	1	oe	...	29.712	46.3	45.8	97	...	10	...	Cum.		
8.	w.s.w.	1	oe	...	29.697	44.3	43.8	96	...	10	...	Cum.		
10.	Calm.	0	cm	...	29.665	44.3	43.8	96	...	10	...	Nimb.		
Midt.	Calm.	0	cm	...	29.617	43.3	42.8	96	...	10	...	Nimb.		
Totals.	...	13	oer oem	...	9269	61.1	51.6	48	...	...	...	Cum. & Nimb.		
Mean.	swbs.	1		...	29.772	45.1	44.3	94	...	10	...			

## SATURDAY, 14TH.

2.	Calm.	0	oe	...	29.596	41.8	40.8	92	...	10	...	Nimb.		At Portsmouth.
4.	Calm.	0	oe	...	29.552	42.3	39.8	82	...	10	...	Nimb.		
6.	Calm.	0	f	...	29.462	44.3	42.8	89	...	10	...	Nimb.		
8.	E.N.E.	1	f	...	29.452	43.3	42.8	96	...	10	...	Nimb.		
10.	E.N.E.	2	oe	...	29.432	43.8	42.8	92	...	10	...	Nimb.		
Noon.	E.N.E.	3	oer	...	29.432	43.8	43.8	100	...	10	...	Nimb.		
2.	E.N.E.	2	oer	...	29.452	43.8	42.8	92	...	10	...	Nimb.		
4.	E.N.E.	1	oer	...	29.482	42.8	42.8	100	...	10	...	Nimb.		
6.	gls.	2	oer	...	29.499	42.8	42.8	100	...	10	...	Nimb.		
8.	gls.	2	oer	...	29.539	42.3	42.3	100	...	10	...	Nimb.		
10.	S.E.	1	oep	...	29.596	46.8	46.3	97	...	10	...	Cum.		
Midt.	Calm.	0	oe	...	29.586	46.8	45.8	93	...	9	...	Cum.		
Totals.	...	14	oer	...	6080	44.6	35.6	1133	...	...	...	Nimb.		
Mean.	E.N.E.	1		...	29.507	43.7	43.0	94	...	10	...			

## SUNDAY, 15TH.

2.	E.S.E.	2	oem	...	29.622	47.3	46.8	97	...	10	...	Cum		At Portsmouth.
4.	E.S.E.	2	oem	...	29.680	46.3	46.3	100	...	10	...	Cum.		
6.	E.S.E.	2	oe	...	29.726	45.8	45.3	97	...	10	...	Cum.		
8.	Calm.	0	oe	...	29.767	47.8	46.8	93	...	10	...	Cum.		
10.	S.S.E.	1	oe	...	29.774	47.3	46.8	97	...	10	...	Cum.		
Noon.	S.S.E.	1	oe	...	29.771	47.3	46.8	97	...	10	...	Cum.		
2.	Calm.	0	oem	...	29.771	47.3	46.8	97	...	10	...	Cum.		
4.	Calm.	0	oem	...	29.768	47.8	47.3	97	...	10	...	Cum.		
6.	Calm.	0	oed	...	29.768	47.8	47.3	97	...	10	...	Cum.		
8.	Calm.	0	oed	...	29.783	48.8	47.8	93	...	10	...	Cum.		
10.	w.s.w.	1	oe	...	29.786	46.8	46.3	97	...	10	...	Cum.		
Midt.	w.s.w.	1	oe	...	29.784	44.8	44.3	96	...	10	...	Cum.		
Totals.	...	10	oem oemd	...	9000	85.1	78.6	78	...	...	...	Cum.		
Mean.	s.	1		...	29.750	47.1	46.5	96	...	10	...			

## MONDAY, 16TH DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w.s.w.	12	bc	...	29.847	44.3	43.8	96	...	8	...	Cum.		At Portsmouth.
4.	w.s.w.	12	bc	...	29.863	43.3	42.8	96	...	8	...	Cum.		
6.	w.s.w.	3	bc	...	29.880	42.3	41.8	96	...	8	...	Cir.		
8.	Calm.	0	bc	...	29.890	42.3	41.8	96	...	7	...	Cum str.		
10.	Calm.	0	ocm	...	29.890	43.8	43.3	88	...	10	...	Nimb.		
Noon.	E.S.E.	1	ocmd	...	29.847	45.8	45.8	100	...	10	...	Nimb.		
2.	E.S.E.	1	ocd	...	29.816	46.8	46.3	97	...	10	...	Nimb.		
4.	E.S.E.	12	ocr	...	29.758	47.3	46.8	97	...	10	...	Nimb.		
6.	s.w.	12	ocr	...	29.717	47.8	46.8	93	...	10	...	Nimb.		
8.	s.w.	3	ocr	...	29.637	47.8	47.3	97	...	10	...	Nimb.		
10.	s.s.w.	3	ocqr	...	29.564	48.8	47.8	93	...	10	...	Nimb.		
Midt.	s.s.w.	4	ocqr	...	29.430	51.3	50.8	97	...	10	...	Nimb.		
Totals.	...	23	bc ocqr	...	9139	71.6	65.1	66	...	111	...	Cum. & Nimb.		
Mean.	s.b.w.	2		...	29.761	46.0	45.4	95	...	9	...			

## TUESDAY, 17TH.

2.	w.s.w.	2	cr	...	29.431	45.8	44.8	93	...	10	...	Nimb.		At Portsmouth.
4.	w.s.w.	2	cr	...	29.411	45.8	45.8	100	...	10	...	Nimb.		
6.	w.s.w.	4	oe	...	29.426	45.8	45.3	97	...	10	...	Nimb.		
8.	w.s.w.	5	ocd	...	29.426	45.8	44.8	93	...	10	...	Nimb.		
10.	w.s.w.	5	bc	...	29.424	46.8	45.8	93	...	8	...	Cum.		
Noon.	w.s.w.	4	bc	...	29.431	47.3	46.3	93	...	6	...	Cum.		
2.	w.s.w.	5	bc	...	29.451	49.3	48.3	93	...	6	...	Cum.		
4.	w.s.w.	5	bc	...	29.481	51.8	50.8	93	...	7	...	Cum.		
6.	w.s.w.	5	oe	...	29.486	45.8	44.8	93	...	8	...	Cum.		
8.	w.s.w.	5	ocqr	...	29.496	45.8	45.8	100	...	10	...	Cum.		
10.	w.s.w.	7	ocqp	...	29.507	42.8	41.8	92	...	10	...	Cum.		
Midt.	w.s.w.	7	ocq	...	29.527	42.3	41.3	92	...	10	...	Cum.		
Totals.	...	56	cr bc ocqp	...	5497	75.1	65.6	52	...	105	...	Nimb. & Cum.		
Mean.	w.s.w.	5		...	29.458	46.3	45.5	94	...	9	...			

## WEDNESDAY, 18TH.

2.	w.s.w.	3	ocq	...	29.529	41.8	40.8	92	...	10	...	Cum.		At Portsmouth.
4.	w.s.w.	4	ocq	...	29.529	42.3	41.3	92	...	10	...	Cum.		
6.	w.s.w.	3	ocq	...	29.609	42.8	40.8	84	...	10	...	Cir.		
8.	w.s.	4	bcq	...	29.670	40.8	40.3	96	...	8	...	Cir.		
10.	w.s.w.	3	bc	...	29.703	42.8	41.8	92	...	5	...	Cir.		
Noon.	w.s.w.	3	bc	...	29.707	44.3	42.8	88	...	5	...	Cir.		
2.	w.	3	bc	...	29.700	44.3	42.8	88	...	7	...	Cum.		
4.	w.	2	bc	...	29.723	42.8	41.8	92	...	4	...	Cir.		
6.	Calm.	0	bc	...	29.720	41.3	40.3	92	...	2	...	Cum str.		
8.	Calm.	0	bef	...	29.717	40.8	40.3	96	...	4	...	Cum str.		
10.	Calm.	0	bef	...	29.707	40.8	40.3	96	...	4	...	Cum str.		
Midt.	Calm.	0	ocd	...	29.683	39.8	39.8	100	...	5	...	Cum.		
Totals.	...	25	ocq bcf	...	7997	24.6	13.1	1108	...	74	...	Cir.	Cum str.	
Mean.	w.s.w.	2		...	29.666	42.0	41.1	92	...	6	...			

## THURSDAY, 19TH DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 9 to 5.	Barometer re- duced to 32° and sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 9 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.S.W.	2	ocr	...	29.668	43.3	42.8	96	...	10	...	Cum.	At Portsmouth
4.	S.S.W.	1	ocr	...	29.658	43.3	42.8	96	...	10	...	Nimb.	
6.	Calm.	0	ocr	...	29.580	46.8	45.8	93	...	10	...	Nimb.	
8.	W.S.W.	1	ocr	...	29.577	45.8	45.3	97	...	10	...	Nimb.	
10.	W.S.W.	1	ocr	...	29.617	44.8	44.8	100	...	10	...	Cum.	
Noon.	W <sup>b</sup> S.	1	bc	...	29.637	46.3	45.8	97	...	9	...	Cum.	
2.	NW <sup>b</sup> N.	1	bc	...	29.622	45.8	44.8	93	...	8	...	Cum.	
4.	NW <sup>b</sup> N.	1	bc	...	29.682	44.8	44.3	96	...	10	...	Cum.	
6.	NW <sup>b</sup> N.	1	oc	...	29.652	42.3	41.8	96	...	10	...	Cum.	
8.	NW <sup>b</sup> N.	1	oc	...	29.705	40.8	40.8	100	...	0	...	Cum.	
10.	Calm.	0	b	...	29.717	39.8	39.8	100	...	0	...	...	
Midt.	Calm.	0	bc	...	29.730	39.8	39.8	100	...	6	...	Cum.	
Totals.	...	10	ocr	...	78.45	43.6	38.6	1164	...	103	...	Nimb. & Cum.	
Mean.	w.	1	bc	...	29.654	43.6	43.2	97	...	9	...		

## FRIDAY, 20TH.

2.	N.N.E.	3	of	...	29.724	39.3	37.8	88	...	10	...	Cum.	At Portsmouth.
4.	N.N.E.	1	cf	...	29.708	39.8	38.3	88	...	10	...	Cum.	
6.	N.N.E.	1	cf	...	29.698	38.8	37.8	92	...	10	...	Cum.	
8.	Calm.	0	f	...	29.678	37.8	37.8	100	...	10	...	Cum.	
10.	E.S.E.	2	c	...	29.617	40.3	39.8	96	...	10	...	Cum.	
Noon.	E.S.E.	3	c	...	29.574	43.3	42.3	92	...	10	...	Cum.	
2.	S.E.	3	cr	...	29.533	44.8	44.3	96	...	10	...	Cum.	
4.	N.N.E.	5	crq	...	29.563	45.8	45.8	100	...	10	...	Cum.	
6.	N.N.E.	4	crq	...	29.563	45.8	45.8	100	...	10	...	Cum.	
8.	N.N.E.	4	crq	...	29.624	45.8	44.8	93	...	10	...	Cum.	
10.	N.N.E.	4	crq	...	29.433	45.8	44.8	93	...	10	...	Cum.	
Midt.	N.N.E.	4	c	...	29.433	46.8	45.8	93	...	10	...	Cum.	
Totals.	...	34	cf & crq	...	7148	34.1	25.1	1131	...	...	...	Cum.	
Mean.	N.E.	3	crq	...	29.595	42.9	42.1	94	...	10	...		

## SATURDAY, 21ST.

2.	S.S.E.	2	cr	...	29.446	46.3	45.8	97	...	10	...	Cum.	At Portsmouth.
4.	S.S.E.	2	cr	...	29.398	46.8	46.8	100	...	10	...	Cum.	
6.	S.	3/4	ocr	...	29.422	47.8	47.8	100	...	10	...	Cum.	At 11.30 A.M. left Portsmouth for Lisbon. Proceeded through the Needles channel.
8.	S.	2 3/4	c	...	29.440	49.8	48.8	93	...	9	...	Cum.	
10.	S.W.	3	bc	...	29.563	50.3	49.8	97	...	7	...	Cum.	At 9 P.M. the weather became thick and drizzly.
Noon.	W.S.W.	2	bc	...	29.526	50.8	49.8	93	...	7	Cir.	Cum str.	
2.	W.S.W.	4	bc	...	29.583	51.8	51.3	97	...	6	Cir.	Cum str.	At 9 P.M. the weather became thick and drizzly.
4.	W.S.W.	3	bc	...	29.634	52.8	50.8	86	48	5	Cir.	Cum.	
6.	W.S.W.	4	bcomp	4	29.649	50.8	50.8	100	48	6	...	Cum.	
8.	S.W.	3	oc	3	29.709	51.3	51.3	100	49	10	...	Cum.	
10.	S.W.	2	ocf	3	29.744	51.8	51.8	100	51	10	...	Cum.	
Midt.	S.S.W.	3	ocp	3	29.753	51.8	51.8	100	50	10	...	Cum.	
Total.	...	34	cr bc	14	65.97	602.1	116.6	1163	246	100	Cir.	Cum. & Cum str.	
Mean.	sw <sup>b</sup> s.	3	ocp	3	29.597	50.2	49.7	97	49	8			

## SUNDAY, 22d DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SW $\frac{1}{2}$ S.	3	ocr	2	29.773	52.8	52.8	100	51	10	...	Nimb.	At noon, lat. 49° 41' N. long. 4° 44' w. Current, N. 36° w. 9'. At 2 A.M. the rain ceased. 10, upper scud from w. N. w. Noon.
4.	SW $\frac{1}{2}$ S.	5	bc	2	29.793	52.8	52.8	100	51	9	...	Cum str.	
6.	SW $\frac{1}{2}$ S.	4	ocm	2	29.808	53.8	53.8	100	51.5	10	...	Cum.	
8.	SSW $\frac{1}{2}$ W.	3	bcm	3	29.839	53.8	52.8	93	51.5	7	Cir cum.	Cum str.	
10.	SSW $\frac{1}{2}$ W.	4	bc	3	29.851	54.3	53.3	93	52	8	Cir.	Cum str.	
Noon.	S $\frac{1}{2}$ E.	3	bc	3	29.839	54.0	53.8	100	52	6	Cir.	Cum str.	
2.	SSW $\frac{1}{2}$ W.	5	bc	3	29.834	54.3	53.3	93	51.5	1	Cir.	...	
4.	S $\frac{1}{2}$ E.	5	bc	3	29.806	54.3	53.8	97	51	2	...	Cum str.	
6.	S $\frac{1}{2}$ E.	5	bc	3	29.753	52.8	52.8	100	51.5	4	...	Cum str.	
8.	S $\frac{1}{2}$ E.	5	bc	3	29.726	52.8	52.8	100	51.5	4	...	Cum.	
10.	S $\frac{1}{2}$ E.	5	bc	3	29.676	52.8	51.8	93	51	5	...	Cum str.	10.30 P.M., cum str. covered 7-10ths of sky. Upper scud from S.S.W.
Midt.	S $\frac{1}{2}$ E.	5	bc	3	29.636	53.8	52.8	93	51	6	...	Cum str.	
Totals.	...	52	ocm bc	33	9334	42.3	36.6	1162	16.5	72	Cir.	Cum str.	
Mean.	S.W.	4		3	29.778	53.5	53.0	97	51.4	6			

## MONDAY, 23d.

2.	S $\frac{1}{2}$ E.	4	bey	3	29.568	53.8	52.8	93	51	6	...	Cum.	At noon, lat. 49° 20' N. long. 7° 23' w. Current, N. 68° w. 8'. Upper scud from w.s.w.
4.	S $\frac{1}{2}$ E.	6	ocq	3	29.563	53.8	53.3	97	50.5	6	...	Cum.	
6.	S $\frac{1}{2}$ E.	7	bey	4	29.413	53.8	52.8	93	50	7	...	Cum.	
8.	S $\frac{1}{2}$ E.	7	ey	5	29.373	53.8	53.3	97	51	10	...	Cum.	
10.	S $\frac{1}{2}$ w.	8	ocqpm	5	29.433	52.8	52.8	100	52	10	...	Cum.	
Noon.	S $\frac{1}{2}$ w.	7	ocqpa	5	29.367	53.3	53.3	100	51.5	9	...	Cum str.	
2.	S $\frac{1}{2}$ w.	6	oc	5	29.343	53.3	52.3	93	51	10	...	Cum str.	
4.	S $\frac{1}{2}$ w.	5	oc	6	29.298	52.8	52.8	100	51	9	...	Cum.	
6.	S $\frac{1}{2}$ E.	5	ocq	6	29.212	51.8	51.3	97	51	9	...	Cum.	
8.	S $\frac{1}{2}$ E.	6	ocq	6	29.184	52.8	52.8	100	51.8	10	...	Nimb.	
10.	S $\frac{1}{2}$ E.	7	ocp	5	29.133	52.8	52.3	97	51	10	...	Cum.	11.30 P.M., 4-10ths of the sky cleared for a short time.
Midt.	S $\frac{1}{2}$ E.	6	ocq	5	29.102	53.3	51.8	90	51.5	10	...	Cum.	
Totals.	...	74	ocq	58	3929	38.1	31.6	1157	13.3	106	...	Cum. & Cum str.	
Mean.	s.	6		5	29.327	53.2	52.6	96	51.1	9			

## TUESDAY, 24th.

2.	S <sup>1</sup> / <sub>2</sub> E.	8	ocq	5	28.923	53.8	52.8	93	51	9	...	Cum str.	At noon, lat. 49° 22' N. long. 9° 19' W. Current, W. 5'. 2 A.M., sky clouded with cum. to E. and str. to N. 3 A.M., sky quite clear. 3.30 A.M., bar. 28.756.
4.	S <sup>1</sup> / <sub>2</sub> E.	9	bey	6	28.839	53.3	52.3	93	51	5	...	Cum.	
6.	S <sup>1</sup> / <sub>2</sub> E.	8	ocq	6	28.709	50.8	49.8	93	51	7	...	Str.	
8.	S <sup>1</sup> / <sub>2</sub> W.	9	ocp	6	28.705	50.8	49.8	93	51	7	...	Cum.	
10.	S.S.W.	8	ocq	6	28.727	50.8	49.8	93	51	10	...	Cum.	
Noon.	S.S.W.	9	ocp	6	28.696	48.3	48.3	100	54	10	...	Cum.	
2.	SW <sup>1</sup> / <sub>2</sub> S.	7	bey	5	28.740	50.3	49.8	97	52	7	...	Cum str.	
4.	SW <sup>1</sup> / <sub>2</sub> S.	7	ocq	5	28.737	50.8	50.3	97	51	8	...	Cum str.	
6.	SW <sup>1</sup> / <sub>2</sub> S.	7	bey	5	28.748	52.8	51.8	93	50.5	7	...	Cum.	
8.	SW <sup>1</sup> / <sub>2</sub> S.	7	bey	5	28.698	52.3	51.8	97	51	7	...	Cum.	Upper scud from W.S.W. The northern part of sky covered with cum str. Very heavy rain from 8 to 9.30 P.M.
10.	SW <sup>1</sup> / <sub>2</sub> S.	8	bey	6	28.688	51.8	51.3	97	50.5	8	...	Str.	
Midt.	S.W.	5	bey	5	28.725	52.8	51.3	90	50.5	5	...	Cum.	
Totals.	...	92	bey	66	8935	18.6	9.1	56	14.5	90	...	Cum. & Str.	
Mean.	S.S.W.	8		5	28.715	51.5	50.8	95	51.2	7			

## WEDNESDAY, 25TH DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w.	6	bc	6	28.736	51.8	50.3	90	51	6	...	Cum str.	At noon, lat. 49° 28' N. long. 8° 23' W. Current, N. 74° E. 14'. 3 A.M., 7-10ths of sky clear; cum str. about the horizon.
4.	s.w.	5	oc	6	28.775	51.8	50.3	90	51	8	...	Cum.	
6.	s.w.	4	bc	5	28.803	50.8	49.8	93	50.5	12	...	Cum.	
8.	s.w.	5	bc	5	28.857	51.8	51.8	100	51	6	...	Cum.	
10.	sw ½ s.	6	bc	4	28.860	51.8	50.8	93	51	4	Cir cum.	...	
Noon.	sw ½ s.	6	bc	4	28.850	51.8	50.8	93	51.5	4	Cir cum.	...	
2.	sw ½ s.	6	bc	3	28.906	51.8	51.3	97	51	12	Cir str.	...	
4.	sw ½ s.	6	bc	3	28.952	51.8	50.3	90	51	4	Cir cum.	...	
6.	sw ½ s.	5	bc	3	29.033	51.3	50.3	93	51	6	...	Cum.	
8.	sw ½ s.	4	bc	3	29.169	50.8	50.3	97	51	3	...	Cum.	
10.	w ½ s.	4	b	3	29.270	51.8	50.8	93	51.5	0	...	...	
Midt.	w ½ s.	3	b	4	29.295	51.8	51.3	97	51.5	0	...	...	
Totals.	...	60	bc	49	11515	19.1	8.1	46	13.0	45	Cir cum.	Cum.	
Mean.	s.w.	5		4	28.959	51.6	50.7	94	51.1	4			

## THURSDAY, 26TH.

2.	w ½ s.	3	bc	4	29.430	51.8	50.8	93	51	3	Cir cum.	...	At noon, lat. 48° 8' N. long. 8° 55' W. Current, N. 57° W. 5.
4.	w ½ s.	3	bc	4	29.480	52.8	50.8	86	51	3	Cir cum.	...	
6.	sw ½ w.	3	bc	3	29.550	52.3	51.3	93	51	1	Str.	...	
8.	sw ½ w.	4	bc	3	29.619	52.8	50.8	86	52	6	...	Cum str.	
10.	sw ½ w.	5	bc	4	29.643	52.8	51.8	93	53	5	Cir.	Cum str.	
Noon.	sw ½ s.	4	bc	4	29.679	52.8	51.8	93	53	5	Cir.	Cir cum.	
2.	s.s.w.	6	cl	4	29.619	52.8	51.8	93	52.5	10	...	Cum.	
4.	s.s.w.	6	bc	4	29.637	52.8	51.8	93	52.5	7	...	Str.	
6.	sw.	7	cl	3	29.659	52.8	51.8	93	54	9	...	Cum.	
8.	sw.	8	oc	4	29.626	53.3	52.8	97	60.7	10	...	Cum.	Wind freshening from s.s.w. during the afternoon.  Sea slightly phosphorescent.
10.	sw.	8	oc	4	29.577	54.3	53.3	93	58.7	10	...	Cum.	
Midt.	sw.	9	oc	5	29.543	54.3	53.8	97	53	10	...	Cum.	
Totals.	...	66	bc	46	7122	35.6	22.6	20	41	79	Cir str.	Cum str.	
Mean.	s.w.	5	oc	4	29.594	52.9	51.9	92	53.4	7			

## FRIDAY, 27TH.

2.	s.e.	7	oc	6	29.443	53.8	53.3	97	53	10	...	Cum.	At noon, lat. 48° 2' N. long. 10° 28' W. Current, N. 4° E. 10'.  10.30 A.M., clouds broke to s.s.w. Wind falling lighter. A green streak in sky to s.s.w. between the clouds. Noon. Sky again overcast.
4.	s.e.	7	oc	6	29.373	53.8	53.3	97	53	10	...	Cum.	
6.	s.s.w.	8	oc	6	29.314	53.8	52.8	93	53	10	...	Nimb.	
8.	s.s.w.	7	oc	7	29.307	55.8	55.3	97	53	10	...	Nimb.	
10.	s.s.w.	8	oc	6	29.251	55.8	55.3	97	53	10	...	Nimb.	
Noon.	s.s.w.	7	oc	5	29.267	53.8	53.8	100	53	10	...	Nimb.	
2.	s.w.	7	oc	5	29.271	53.8	53.8	100	53	10	...	Nimb.	
4.	s.w.	6	oc	5	29.282	53.3	51.8	90	52.5	10	...	Cum.	
6.	s.w.	4	bc	5	29.392	51.8	49.8	86	52.5	6	...	Cir cum.	
8.	s.w.	3	bc	5	29.388	51.8	49.8	86	52.5	4	...	Cir cum.	
10.	sw ½ w.	3	bc	5	29.378	50.8	47.8	80	50	3	...	Cum str.	
Midt.	s.w.	4	bc	5	29.422	50.8	47.8	80	50	3	...	Cum str.	
Totals.	...	71	oc	66	4088	39.1	24.6	1103	28.5	96	...	Nimb. & Cum str.	
Mean.	s.s.w.	6	bc	5	29.340	53.3	52.0	92	52.4	8			

SATURDAY, 28<sup>TH</sup> DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 6 to 10.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, sat. = 100.	Temperature of sea surface.	Clouds, 6 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W.S.W.	4	bc	5	29.431	50.3	47.8	83	52	3	...	Cum.	At noon, lat. 46° 21' N. long. 10° 36' W. Current, N. 45° E. 10'.
4.	W.S.W.	3	bc	5	29.455	50.3	47.3	80	52.5	3	...	Cum.	
6.	W.S.W.	4	bc	5	29.479	50.3	47.8	83	52	3	...	Cum.	Heavy swell from W.S.W.
8.	swW.	4	bc	5	29.503	50.8	48.3	83	52.5	3	...	Cum str.	
10.	swW.	4	bc	4	29.530	51.3	47.8	77	52	4	...	Cir cum.	Rain squalls in early part of afternoon.
Noon.	sswW.	4	bc	4	29.520	50.8	47.8	80	52	4	...	Cum str.	
2.	sswW.	3	bc	3	29.551	48.8	45.8	79	52	4	...	Cum.	Swell decreasing.
4.	S.	3	bc	3	29.551	51.8	49.3	83	53	4	...	Cum.	
6.	s.s.w.	3	bc	3	29.568	50.8	49.3	90	53	5	...	Cum.	
8.	s.s.w.	3	bc	3	29.589	50.3	48.3	86	53.5	2	...	Cum.	
10.	S.W.	2	bc	2	29.621	48.8	46.8	86	53	1	...	Cum.	
Midt.	S.W.	2	bc	2	29.620	48.8	46.8	86	54	1	...	Cir cum.	
Totals.	...	28	bc	44	6427	603.1	93.1	996	31.5	39	...	Cir cum. & Str.	
Mean.	s.w.	2		4	29.536	50.3	47.8	83	52.6	3	...		

SUNDAY, 29<sup>TH</sup>.

2.	swW.	12	bc	2	29.668	47.8	46.8	93	53	3	Cir.	Cum.	At noon, lat. 44° 5' N. long. 10° 47' W. Current, W. 5'.
4.	W.	3	cu	12	29.700	47.8	46.8	93	53	6	...	Cum.	
6.	SEW.	1	bc	12	29.744	48.8	46.8	86	53	3	...	Cum.	Long swell from W.S.W.
8.	E.S.E.	12	bc	12	29.750	49.8	48.3	90	53	5	...	Cum.	
10.	N.E.E.	3	bc	12	29.897	50.3	49.3	93	54	4	...	Cum.	
Noon.	E.N.E.	12	bc	12	29.889	50.8	48.8	86	54	3	...	Cum.	
2.	E.N.E.	3	bc	12	29.937	50.8	49.3	90	54	3	...	Cum str.	
4.	E.N.E.	12	bc	12	29.979	51.8	50.8	93	54	1	...	Cum str.	
6.	E.	3	bc	12	29.974	51.8	50.3	90	54	1	...	Cum.	
8.	ESE.	3	bc	12	30.018	52.3	49.8	83	54	2	...	Cum.	
10.	SESE.	12	bc	2	30.032	51.8	49.8	86	53.2	2	...	Cum.	
Midt.	SESE.	1	bc	2	30.056	51.8	49.8	86	54	2	...	Cum.	
Totals.	...	27	bc	24	10744	5.6	106.6	1069	43.2	35	...	Cir.	Cum str.
Mean.	SESE.	2		2	29.895	50.5	48.9	89	53.6	3	...		

MONDAY, 30<sup>TH</sup>.

2.	ESE.	1	bc	1	30.036	51.8	49.8	86	55	1	...	Str.	At noon, lat. 41° 57' N. long. 9° 42' W. Current, W. 4'.
4.	ESE.	1	bc	1	30.058	52.8	50.8	86	55	2	...	Cum str.	
6.	s.s.e.	1	bc	1	30.059	52.8	51.8	93	55	4	...	Cum str.	Sea slightly phosphorescent.
8.	S.	3	bc	1	30.060	52.8	51.8	93	55	1	...	Cum.	
10.	S.	4	bc	1	30.073	54.8	52.8	87	55	6	...	Cum str.	Nimbl. over the land; wind freshening from S.S.W. Weather thick over land.
Noon.	S.	4	oc	2	30.061	54.3	52.8	90	55	10	...	Cum.	
2.	S.	4	bc	2	30.032	53.8	51.8	86	55	8	...	Cum str.	Sea slightly phosphorescent.
4.	swW.	5	ocpp	3	30.047	53.8	51.8	86	55	10	...	Cum str.	
6.	swW.	5	ocpp	4	30.055	53.8	51.8	86	55	7	...	Cum.	Heavy squalls with very heavy rain between 9 and 11 P.M.
8.	S.	4	oc	5	30.064	54.8	53.8	93	55	9	...	Cum.	
10.	S.	6	ocpp	4	30.018	53.8	52.8	93	55	10	...	Nimbl.	
Midt.	S.	7	ocpp	4	29.973	53.8	52.8	93	55	10	...	Nimbl.	
Totals.	...	45	bc ocpp	29	536	43.1	24.6	1072	...	78	...	Cum str. & Nimbl.	
Mean.	swW.	4		2	30.045	53.6	52.0	89	55	6	...		

## TUESDAY, 31ST DECEMBER 1872.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.	7	oqm	5	29.831	52.8	52.3	97	55	10	...	Nimb.	At noon, lat. 41° 49' S. long. 9° 48' W. Current, S. 14° W. 31.
4.	s.e.	8	oqr	5	29.831	53.8	53.8	100	55	10	...	Nimb.	
6.	s.w.½w.	6	oqr	5	29.915	55.8	54.8	93	56	10	...	Nimb.	Very heavy rain squalls from s.s.w. Cross sea.
8.	s.w.½w.	9	oqr	4	29.917	55.8	54.8	93	56	10	...	Nimb.	
10.	w.	3	bc	4	29.954	55.8	54.8	93	56	6	...	Cir cum.	
Noon.	w.	4	c	3	29.957	55.8	54.8	93	56	7	...	Cir cum.	
2.	w.	4	bc	3	30.023	57.8	55.8	87	56	6	...	Cir cum.	
4.	w.	4	bc	3	30.059	56.3	54.8	90	56	6	...	Cir cum.	
6.	w.	4	bc	3	30.100	56.3	55.0	91	56	6	...	Cum.	
8.	w.	4	bc	3	30.041	56.8	55.3	90	56	6	...	Cum.	
10.	w.s.w.	3	bc	2	30.234	56.8	54.8	87	56.5	2	...	Cum.	
Midd.	w.	3	bc	2	30.224	56.8	54.8	87	56.5	2	...	Cum.	
Totals.	...	51	oqr bc	41	0.86	70.6	55.8	1101	71	81	...	Nimb., Cir cum., & Cum.	
Mean.	w.s.w.	4		3	30.007	55.9	54.6	92	55.9	7	...		

## WEDNESDAY, 1ST JANUARY 1873.

2.	w.	2	bc	1	30.201	56.3	54.3	87	56.5	7	...	Cir cum.	At noon, lat. 40° 23' S. long. 9° 48' W. Current, S. 75° E. 12.
4.	w.	1	bc	1	30.201	56.8	54.8	87	56.5	6	...	Cir cum.	
6.	s.w.	2	bc	1	30.190	56.8	55.8	93	56.5	7	...	Cir cum.	Frequent rain squalls from s.s.w. Sea very luminous.
8.	s.s.w.	4	bc	1	30.202	56.8	56.3	97	57	8	...	Cir cum.	
10.	s.s.w.	4	bc	1	30.245	56.8	55.3	90	57	8	...	Cir cum.	
Noon.	s.s.w.	3	oc	1	30.283	57.3	55.8	90	57	10	...	Cum.	
2.	s.s.w.	3	cq	3	30.150	57.8	56.8	93	57	7	...	Cum.	
4.	s.s.w.	4	bc	2	30.128	57.8	56.8	93	57	5	...	Cum.	
6.	w.	3	oc	2	30.134	57.8	56.8	93	58	10	...	Cum.	
8.	w.	4	bc	1	30.157	56.8	56.3	96	57	7	...	Cum.	
10.	w.	5	cqr	3	30.082	58.3	56.8	99	57	10	...	Nimb.	
Midd.	w.	8	cqr	3	30.048	57.8	56.8	93	57	10	...	Nimb.	
Totals.	...	43	bc & cqr	20	2.021	87.1	72.6	22	83.5	95	...	Cir cum., Cum., & Nimb.	
Mean.	s.w.½w.	4		2	30.168	57.3	56.0	92	57	8	...		

## THURSDAY, 2d.

2.	s.w.½w.	4	cqr	4	30.121	57.8	56.8	93	57	5	...	Cum str.	At noon, lat. 39° 55' S. long. 10° 5' W. Current, S. 56° E. 7.
4.	w.	3	bc	4	30.123	57.8	56.8	93	57	5	...	Cum str.	
6.	w.	3	bc	3	30.181	56.3	54.3	87	56	2	...	Cum.	Sea slightly phosphorescent.
8.	w.	3	bc	3	30.247	55.8	54.8	93	56	3	...	Cum.	
10.	w.½s.	3	bc	3	30.292	56.8	54.8	87	56.5	2	...	Cum.	
Noon.	s.w.½w.	2	bc	2	30.298	57.3	55.8	78	57	2	...	Cum.	
2.	s.w.½w.	2	bc	2	30.277	56.8	55.8	81	57	3	...	Cir str.	
4.	s.w.½w.	3	bc	2	30.300	56.8	55.8	81	57	3	...	Cir cum.	
6.	w.s.w.	2	bc	2	30.322	56.8	55.8	81	57	2	...	Cum.	
8.	w.s.w.	1	bc	2	30.359	56.3	54.8	90	56	1	...	Cum.	
10.	w.s.w.	1	bc	2	30.350	55.8	53.3	84	56.5	1	...	Cum.	
Midd.	w.s.w.	2	bc	1	30.316	55.8	53.8	87	56.5	1	...	Cum.	
Totals.	...	29	bc	30	3.216	80.1	54.6	1035	79.5	30	...	Cir str.	Cum.
Mean.	w.	2		2½	30.268	56.7	54.5	86	56.6	2½	...		

## FRIDAY, 3D JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.s.w.	1	bc	1	30-371	55-8	53-8	87	57	1	Cir.	...	At noon, in Tagus river.
4.	s.s.w.	2	bc	1	30-331	55-8	53-8	87	57	2	Cir.	...	
6.	Calm.	0	bc	1	30-263	56-8	53-8	81	57	12	...	Cum.	
8.	s.s.e.	2	bc	1	30-341	56-8	55-8	93	57	12	...	Cum.	Swell from w.n.w.
10.	s.e.	1	bc	1	30-430	56-3	54-3	87	55	3	...	Cir cum.	
Noon.	...	0	bc	...	30-413	54-8	52-8	87	53	3	...	Cum str.	
2.	Calm.	0	bc	...	30-388	54-8	52-8	87	...	4	...	Cum.	At 1 p.m. arrived at Lisbon.
4.	w.s.w.	1	bc	...	30-402	55-8	53-8	...	...	...	...	Cum.	
6.	Calm.	0	bc	...	30-374	54-8	52-8	87	54	2	...	Cum.	
8.	Calm.	0	bc	...	30-400	52-8	51-8	93	54	2	...	Cir cum.	
10.	Calm.	0	b	...	30-395	52-8	51-8	93	...	0	...	...	
Midd.	Calm.	0	b	...	30-394	48-8	47-8	93	52-5	0	...	...	
Totals.	...	8	bc	1	4502	56-1	35-1	102	49-5	29	Cir.	Cum.	
Mean.	s.s.e.	1			30-375	54-7	52-9	88	55-5	2			

## SATURDAY, 4TH.

2.	Calm.	0	b	...	30-414	48-8	47-8	93	...	0	...	...	At Lisbon.
4.	Calm.	0	bc	...	30-415	45-8	44-8	93	...	1	...	Str.	
6.	E.N.E.	1	cf	...	30-374	45-3	44-8	97	...	10	...	Cum.	
8.	N.N.E.	1	bcum	...	30-380	43-8	43-8	100	...	4	...	Cir cum.	Cum. & Nb.
10.	Calm.	0	bc	...	30-369	51-8	49-8	86	...	2	...	Cum.	
Noon.	Calm.	0	bc	...	30-360	53-8	52-8	93	...	1	...	Cum.	
2.	s.s.w.	2	bcq	...	30-336	57-3	53-8	79	...	5	...	Cum.	
4.	s.s.w.	2	bcq	...	30-334	54-8	52-8	87	...	9	...	Cum.	
6.	Calm.	0	oc	...	30-269	52-8	51-8	93	...	8	...	Cum.	
8.	E.S.E.	3	oc	...	30-321	54-8	52-8	87	...	10	...	Cum.	Cum.
10.	Calm.	0	bc	...	30-288	53-8	51-8	86	...	4	...	Cum.	
Midd.	s.s.e.	2	c	...	30-358	52-8	51-8	93	...	5	...	Cum.	
Totals.	...	11	bcum	...	4218	15-6	118-6	1087	...	59	...	Cum.	
Mean.	s.e.e.	1		...	30-351	51-3	49-9	91	...	5	...		

## SUNDAY, 5TH.

2.	s.s.e.	3	ocq	...	30-283	55-8	54-8	93	...	10	...	Nimb.	At Lisbon.
4.	s.s.w.	4	ocq	...	30-306	55-8	54-8	93	...	10	...	Nimb.	
6.	swbs.	4	ocqp	...	30-315	55-8	55-8	100	...	10	...	Nimb.	
8.	swbs.	4	ocq	...	30-347	56-8	55-8	93	...	10	...	Nimb.	Cum.
10.	swbs.	3	ocqr	...	30-368	56-8	55-8	93	...	10	...	Nimb.	
Noon.	swbs.	2	ocqr	...	30-368	56-8	55-8	93	...	10	...	Nimb.	
2.	swbs.	3	bcq	...	30-352	56-8	55-8	94	...	9	...	Cum.	
4.	swbs.	4	ocp	...	30-364	58-8	57-8	94	...	10	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	Calm.	0	c	...	30-390	56-8	55-8	93	...	10	...	Cum.	Cum.
10.	Calm.	0	c	...	30-397	57-8	54-8	81	...	10	...	Cum.	
Midd.	Calm.	0	c	...	30-399	58-8	55-8	82	...	10	...	Cum.	
Totals.	...	27	ocqp	...	3889	79-8	65-8	19	...	...	...	Nimb. & Cum.	
Mean.	s.s.w.	3		...	30-354	57-3	56-0	92	...	10	...		

## MONDAY, 6TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Upper.				Lower.		
2.	Caln.	0	oe	...	30.466	51.8	50.8	93	...	10	...	Cum.	At Lisbon.	
4.	E. S. E.	1	oe	...	30.371	51.8	50.8	93	...	10	...	Cum.		
6.	Caln.	0	oe	...	30.365	51.8	51.8	100	...	10	...	Cum.		
8.	Caln.	0	oe	...	30.371	51.8	51.8	100	...	10	...	Cum.	Small halo round the moon. Heavy dew.	
10.	Caln.	0	e	...	30.416	51.8	51.8	100	...	10	...	Cum.		
Noon.	s.	3	e	...	30.373	51.8	51.8	100	...	6	...	Cum.		
2.	s. s. w.	3	be	...	30.300	56.8	...	...	...	5	...	Cum.		
4.	s. s. w.	2	be	...	30.297	56.8	...	...	...	6	...	Cir cum.		
6.	Caln.	0	be	...	30.234	56.8	...	...	...	1	...	Cum.		
8.	...	...	...	...	...	...	...	...	...	...	...	...		
10.	s. s. w.	1	bew	...	30.273	55.3	51.8	97	...	1	...	Cir cum.		
Midt.	s. s. w.	2	bew	...	30.279	52.3	51.8	97	...	1	...	Cir cum.		
Totals.	...	12	oe & bew	...	3685	38.8	15.4	780	...	70	...	Cum.		
Mean.	s.	1	...	...	30.335	53.5	51.9	97	...	6	...	...		

## TUESDAY 7TH.

2.	S. S. W.	1	be	...	30.254	51.3	49.8	90	...	1	...	Cir cum.	At Lisbon.
4.	Caln.	0	be	...	30.239	49.8	48.8	93	...	1	...	Cir cum.	
6.	Caln.	0	be	...	30.236	50.8	48.8	86	...	3	...	Cum.	
8.	Caln.	0	be	...	30.234	51.8	49.8	86	...	4	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	E. S. E.	1	be	...	30.192	55.3	52.8	85	...	6	...	Cum.	Atmosphere very clear.
2.	S. S. E.	1	be	...	30.153	55.8	52.8	81	...	5	...	Cir cum.	
4.	S. S. E.	1	be	...	30.133	56.8	52.8	75	...	9	...	Cir str.	
6.	S. S. E.	1	be	...	30.100	55.3	53.8	90	...	9	...	Cum str.	
8.	S. S. E.	1	be	...	30.100	53.8	51.8	86	...	7	...	Cum.	
10.	S. S. E.	1	be	...	30.048	53.8	52.3	90	...	4	...	Cir cum.	Large halo round the moon.
Midt.	S. S. E.	1	be	...	30.055	52.8	51.8	93	...	3	...	Cir cum.	
Totals.	...	8	be	...	1744	37.3	15.3	75	...	55	...	Cum. & Cir cum.	
Mean.	S. E. S.	1	...	...	30.159	53.4	51.4	87	...	5	...	Cir str.	

## WEDNESDAY, 8TH.

2.	E. S. E.	3	be	...	30.004	54.8	53.3	90	...	3	...	Cum.	At Lisbon.
4.	S. E. E.	4	beql	...	29.964	55.8	53.8	87	...	4	...	Cum.	
6.	s.	4	beql	...	29.931	56.8	54.8	87	...	8	...	Cum.	Lightning from south to west.
8.	S. S. W.	6	omqrlt	...	29.931	52.8	51.8	93	...	10	...	Nimb.	
10.	S. S. W.	6	ocqr	...	29.994	51.8	50.8	93	...	10	...	Nimb.	7 A.M., heavy squall, with rain, thunder, and lightning.
Noon.	S. S. W.	5	beql	...	29.985	54.3	53.8	90	...	4	...	Cum str.	
2.	s.	4	beql	...	30.035	56.8	54.8	87	...	6	...	Cum.	Heavy rain squalls.
4.	S. S. W.	3	beql	...	30.071	54.8	52.8	87	...	4	...	Cum.	
6.	S. S. W.	2	be	...	30.051	55.3	53.8	90	...	4	...	Cum str.	
8.	S. S. W.	1	bem	...	30.075	54.3	52.8	90	...	2	...	Cum.	
10.	Caln.	0	be	...	30.058	53.8	53.8	100	...	2	...	Cum.	
Midt.	Caln.	0	be	...	30.050	52.8	52.3	97	...	2	...	Cum.	
Totals.	...	38	beqlt	...	149	54.1	38.6	11	...	59	...	Nimb., Cum., & Cum str.	
Mean.	s.	3	...	...	30.012	54.5	53.2	91	...	5	...	...	

## THURSDAY, 9TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometere, duced to 32° and sea-level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.s.w.	12	bc	...	30.095	54.3	52.8	90	...	12	...	Cum.	At Lisbon.
4.	s.s.w.	12	bc	...	30.089	53.8	53.3	97	...	12	...	Cum.	
6.	swbs.	12	bc	...	30.081	56.3	55.3	93	...	8	...	Cum str.	Heavy squalls from s.s.w.
8.	swbs.	3	bc	...	30.069	55.8	54.8	93	...	7	...	Cir str.	
10.	s.s.w.	6	cmq	...	30.073	57.8	56.8	93	...	5	...	Cir.	
Noon.	s.s.w.	7	cmq	...	30.049	59.8	58.3	90	...	9	...	Cir.	
2.	s.s.w.	6	eq	...	29.951	59.8	58.3	87	...	9	...	Cum.	Heavy squalls from s.s.w.
4.	s.s.w.	7	eq	...	29.954	59.8	57.8	87	...	9	...	Cum.	
6.	s.s.w.	6	eq	...	30.003	57.8	56.8	90	...	10	...	Cir.	
8.	s.s.w.	7	cpq	...	30.002	57.8	56.8	90	...	10	...	Cir.	
10.	s.s.w.	7	cpq	...	29.998	57.8	56.8	90	...	9	...	Cum.	
Midd.	s.s.w.	8	eq	...	29.919	57.8	56.8	90	...	8	...	Cum.	
Totals.	...	63	...	...	283	88.6	74.6	10	...	88	...	...	
Mean.	s.s.w.	5	...	...	30.024	57.4	56.2	91	...	7	...	...	

## FRIDAY, 10TH.

2.	s.s.w.	5	eq	...	30.007	58.3	56.8	90	...	9	...	Cum.	At Lisbon.
4.	s.s.w.	4	eq	...	30.003	58.3	56.8	90	...	9	...	Cum.	
6.	s.s.w.	4	eq	...	30.029	56.8	56.3	97	...	10	...	Cum.	Heavy squalls of wind and rain.
8.	s.s.w.	4	eqm	...	30.043	57.8	57.3	97	...	10	...	Cum.	
10.	s.s.w.	7	oeqr	...	30.018	58.8	58.8	100	...	10	...	Cum.	
Noon.	s.s.w.	6	oeqr	...	29.982	58.8	58.8	100	...	10	...	Nimb.	
2.	s.s.w.	6	oeqr	...	30.033	57.8	57.8	100	...	10	...	Cum.	
4.	s.s.w.	7	oeqr	...	29.925	57.8	57.8	100	...	10	...	Cum.	
6.	s.s.w.	6	oeqr	...	29.915	56.8	56.8	100	...	10	...	Cum.	
8.	s.s.w.	6	bcqr	...	29.919	57.8	56.8	93	...	7	...	Cum.	
10.	s.s.w.	6	oeqr	...	29.903	57.8	56.8	93	...	10	...	Cum.	
Midd.	s.s.w.	6	oeqr	...	29.889	56.3	55.8	97	...	10	...	Cum.	
Totals.	...	67	...	...	11666	93.1	86.6	77	...	115	...	...	Cum. & Nimb.
Mean.	s.s.w.	6	...	...	29.972	57.8	57.2	96	...	10	...	...	

## SATURDAY, 11TH.

2.	s.s.w.	6	eq	...	29.858	54.8	54.8	100	...	10	...	Cum.	At Lisbon.
4.	s.s.w.	7	eq	...	29.843	52.8	52.8	100	...	...	...	...	
6.	s.	5	bcqr	...	29.815	55.8	54.8	93	...	7	...	Cum.	1.20 A.M., very heavy squall with rain.
8.	s.	5	bcqr	...	29.813	54.8	54.8	100	...	7	...	Cum.	
10.	s.s.e.	4	eqpm	...	29.876	56.3	55.8	97	...	10	...	Cum.	
Noon.	s.e.	3	eqpm	...	29.854	56.8	56.5	100	...	10	...	Cum.	
2.	s.e.	2	oeqr	...	29.853	55.8	55.8	100	...	10	...	Nimb.	
4.	s.s.e.	1	oeqr	...	29.851	54.8	54.8	100	...	10	...	Cum.	
6.	s.s.e.	2	oeqr	...	29.870	55.3	55.3	100	...	10	...	Cum.	
8.	s.s.e.	2	eq	...	29.903	54.8	54.8	100	...	10	...	Cum.	
10.	s.e.	1	eqpm	...	29.933	55.8	55.8	100	...	10	...	Cum.	Heavy rain squalls.
Midd.	s.e.	2	oeqr	...	29.931	55.0	54.8	98	...	10	...	Cum.	
Totals.	...	43	...	...	10400	62.8	60.8	1186	...	104	...	...	Cum. & Nimb.
Mean.	s.e.	4	...	...	29.867	55.2	55.1	99	...	9	...	...	

## SUNDAY, 12TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.			Humidity, Sat. — 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	E.S.E.	2	ct1	...	29.941	54.3	54.3	100	...	10	...	Cm.&Nb.	...	At Lisbon.
4.	E.S.E.	3	bc1	...	29.963	53.8	53.3	97	...	8	...	Cm.&Nb.	...	
6.	S.S.W.	4	bc1	...	30.010	53.8	52.8	93	...	8	...	Cir cum.	...	
8.	S.S.W.	4	...	...	30.106	53.8	52.8	93	...	...	...	Cir.	...	
10.	E.N.E.	3	bc	...	30.139	53.8	53.8	100	...	7	...	Cir.	Cum.	5 P.M., left Lisbon for Gibraltar.
Noon.	E.N.E.	3	bc	...	30.154	53.8	53.8	100	...	6	...	Cum.	Cum.	
2.	E.N.E.	1	bc	...	30.167	53.8	55.8	87	...	4	...	Cum cir.	Cum cir.	
4.	E.N.E.	1	bc	...	30.162	53.8	56.8	82	...	1	...	Cum.	Cum.	
6.	E.N.E.	1	bc	...	30.202	55.8	54.3	90	...	1	...	Str.	Str.	
8.	E.N.E.	1	b	...	30.276	56.8	55.3	90	57	0	...	...	...	
10.	N.E.	3	b	...	30.333	56.8	52.8	75	...	0	...	...	...	
Midd.	N.	3	b	...	30.315	54.8	52.8	87	57	0	...	...	...	
Totals.	...	28	bc	...	1894	65.1	48.6	1094	114	45	...	Cir.	Cum. & Nimb.	
Mean.	E.	2	...	...	30.150	55.4	54.0	91	57	4	...	...	...	

## MONDAY, 13TH.

2.	NNE½E.	3	b	1	30.334	52.8	51.8	93	56.5	0	...	...	...	At noon, lat. 38° 7' N. long. 9° 14' W.
4.	N.E.	3	b	1	30.317	53.8	53.5	99	56.5	0	...	...	...	
6.	NE½E.	3	b	1	30.327	52.8	51.8	93	56.5	0	...	...	...	
8.	NE½E.	3	b	1	30.357	52.8	51.8	93	57	0	...	...	...	
10.	NE½E.	3	b	1	30.374	53.8	52.8	93	57	0	...	...	...	Cir cum. rising from S.S.W.
Noon.	NE½E.	3	b	1	30.339	54.3	52.8	90	57	0	...	...	...	
2.	N.E.	3	bc	1	30.276	57.3	56.8	97	57.2	3	...	Cir.	...	
4.	NE½E.	2	bc	1	30.252	57.8	56.8	93	57	3	...	Cir cum.	...	
6.	E.S.E.	3	bc	1	30.293	57.8	56.8	93	57	1	...	Cum.	...	
8.	...	...	...	1	...	...	...	...	...	...	...	...	...	
10.	E½N½N.	3	b	1	30.261	56.8	55.8	93	57	0	...	...	...	Totals.
Midd.	E½N½N.	3	b	1	30.234	55.0	54.3	95	57.2	0	...	...	...	
Totals.	...	32	bc	...	3364	55.0	45.0	42	75.9	7	...	Cir cum.	Cum.	
Mean.	NE½E.	3	...	1	30.306	55.0	54.1	94	56.9	1	...	...	...	

## TUESDAY, 14TH.

2.	E½S.	3	bc	1	30.216	52.8	51.8	93	56	6	...	Cir cum.	...	At noon, lat. 38° 15' N. long. 9° 50' W.
4.	E½S.	3	bc	1	30.215	53.3	51.8	90	56	8	...	Cum.	...	
6.	E½S.	3	bc	1	30.225	53.8	52.8	93	57	5	...	Cum.	...	
8.	E½S.	1	c	1	30.246	53.8	52.8	93	...	7	...	Cum.	...	
10.	S½E½E.	3	c	1	30.248	54.8	54.8	100	57	10	...	Cum str.	...	Clouds from westward moving slowly.
Noon.	S½E½E.	4	c	2	30.222	55.8	55.3	97	57.5	10	...	Str.	...	
2.	S½E½E.	3	bc	1	30.192	58.3	57.3	93	57.5	9	...	Cum.	...	
4.	S½E½S.	2	bc	1	30.176	58.8	58.8	100	57.5	8	...	Cir cum str.	...	
6.	S½E½S.	3	oc	1	30.165	57.8	55.8	87	57.5	9	...	Cum.	...	
8.	S½E½E.	2	bcm	1	30.230	58.8	58.8	100	58	7	...	Cum.	...	
10.	S½E½E.	2	bcmw	1	30.242	60.3	59.3	94	57.5	6	...	Cir cum.	...	Dew.
Midd.	S½E½E.	2	bcmw	1	30.236	59.8	59.3	97	58	8	...	Cum.	...	
Totals.	...	31	bcm	13	2613	78.1	68.6	1137	79.5	93	...	...	Cum str.	
Mean.	S.E.	3	...	1	30.218	56.5	55.7	95	57.2	8	...	...	...	

## WEDNESDAY, 15TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE by S.	12	bc	1	30.266	59.8	59.3	97	59	9	Cir str.	Str.	At noon, lat. 36° 59' N. long. 9° 14' W. Current, W. 10'. Upper scud from S. S. W.
4.	SE by S.	12	bc	1	30.258	59.3	58.8	97	58.5	6	...	Str.	
6.	SE by S.	1	bc	1	30.244	58.8	57.8	94	58	4	...	Cum.	
8.	SE by S.	1	bc	1	30.317	58.8	57.8	94	58	6	...	Cum.	
10.	SE by S.	3	bc	1	30.347	59.8	57.8	88	59.5	5	...	Cum.	
Noon.	SE by S.	3	bc	1	30.333	62.3	60.8	91	60	6	...	Cum.	
2.	SE by S.	12	bc	1	30.300	62.3	60.8	91	60	3	Cir str.	...	
4.	SE by S.	12	bc	1	30.298	60.8	59.8	94	59	3	Cir str.	...	
6.	SE by S.	1	bc	1	30.259	59.8	59.3	97	59	4	...	Cum.	
8.	S by W.	1	b	1	30.309	60.3	59.8	97	59	0	...	...	
10.	S by W.	12	b	1	30.345	59.8	58.8	94	58.5	0	...	...	
Midt.	S by W.	12	b	1	30.317	59.8	57.8	88	57	0	...	...	
Totals.	...	22	bc	...	3593	1.6	108.6	42	105.5	46	Cir str.	Cum.	
Mean.	S. S. E.	2	bc	1	30.299	60.1	59.0	94	58.8	4	...	...	

## THURSDAY, 16TH.

2.	SE by E.	2	b	1	30.304	58.8	57.8	94	56	0	...	...	At noon, lat. 36° 25' N. long. 8° 12' W. Current, S. 6'.
4.	SE by E.	2	b	1	30.285	58.8	57.8	94	55.5	0	...	...	
6.	SE by E.	1	b	1	30.272	58.8	56.8	88	56	0	...	...	
8.	SE by E.	1	b	1	30.316	58.8	56.8	88	56	0	...	...	
10.	E. S. E.	1	b	1	30.341	57.8	57.8	100	60.5	0	...	...	
Noon.	E. S. E.	1	b	1	30.308	58.8	57.8	94	60.0	0	...	...	
2.	E. S. E.	1	bc	1	30.279	60.3	59.8	97	59.5	2	...	Cum.	
4.	S by E.	2	bc	1	30.291	59.8	59.8	100	60.0	4	...	Cum.	
6.	S by E.	2	bc	1	30.363	59.8	59.8	100	60	2	...	Cum.	
8.	S by E.	1	bc	1	30.310	58.8	57.8	94	60	2	...	Cum.	
10.	SSW by W.	2	bc	1	30.334	58.8	57.8	94	60	2	...	Cum.	
Midt.	SW by W.	2	bc	1	30.316	59.8	59.3	97	60	4	...	Cum.	
Totals.	...	18	bc	...	3719	109.1	99.1	60	103.5	16	...	Cum.	
Mean.	SE by S	1	bc	1	30.310	59.1	58.3	95	58.6	1	...	...	

## FRIDAY, 17TH.

2.	SSW by W.	1	bey	0	30.306	58.8	58.8	100	59.5	2	Cir.	Cir cum.	At noon, lat. 35° 54' N. long. 6° 52' W. Current, S. 35' E. 3'. Dew.
4.	W by N.	2	bey	0	30.310	58.8	57.8	94	60	5	...	Cir cum.	
6.	NW by W.	2	hep	0	30.311	58.8	57.8	94	61	4	...	Cum.	
8.	NW by W.	3	hep	1	30.348	58.8	57.8	94	61	3	...	Cum.	
10.	NW by E.	4	bc	0	30.413	57.8	57.3	97	60	5	Cir.	Cum.	
Noon.	NW by E.	3	bc	0	30.395	59.0	58.8	98	60	7	...	Cum.	
2.	NW by E.	2	bc	0	30.393	58.8	58.3	97	60	9	...	Cum str.	
4.	N by E.	2	bc	0	30.357	57.0	56.8	98	60	4	...	Cum str.	
6.	N by E.	2	bc	0	30.351	56.8	56.8	100	59	2	...	Cum.	
8.	N by E.	2	b	0	30.381	57.8	56.8	94	59	0	...	...	
10.	N by E.	3	b	0	30.399	54.8	53.8	93	59	0	...	...	
Midt.	NW by W.	2	b	0	30.381	53.8	52.8	93	58	0	...	...	
Totals.	...	28	hep	...	4345	91.0	83.6	72	116.5	41	Cir.	Cum.	
Mean.	N. N. W.	2	hep	...	30.362	57.6	57.0	96	59.7	3	...	...	

## SATURDAY, 18TH JANUARY 1873.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds (0 to 10).		Description of Clouds.		REMARKS.	
	True Direction.	Force.				Dry Bulb.	Damp Bulb.			Upper.	Lower.				
2.	sw <sup>1</sup> by w <sup>1</sup>	2	b	0	30.358	52.8	49.8	80	57	0	...	...	...	At Gibraltar.  S A.M., arrived at Gibraltar.	
4.	sw <sup>1</sup> by w <sup>1</sup>	2	b	0	30.347	52.8	49.8	80	59	0	...	...	...		
6.	sw <sup>1</sup> by w <sup>1</sup>	1	b	0	30.332	52.8	49.8	80	58	0	...	...	...		
8.	sw <sup>1</sup> by w <sup>1</sup>	12	bc	0	30.332	53.8	49.8	74	...	1	...	...	Cum.		
10.	sw <sup>1</sup> by w <sup>1</sup>	12	bc	0	30.372	54.8	49.8	70	...	1	Cir str.	...	Cum.		
Noon.	sw <sup>1</sup> by w <sup>1</sup>	4	b	0	30.349	56.3	50.8	68	...	0	...	...	...		
2.	sw <sup>1</sup> by w <sup>1</sup>	4	b	0	30.311	56.3	50.8	68	...	0	...	...	...		
4.	sw <sup>1</sup> by w <sup>1</sup>	3	b	0	30.324	56.8	51.8	70	...	0	...	...	...		
6.	sw <sup>1</sup> by w <sup>1</sup>	4	b	0	30.369	54.8	49.8	70	...	0	...	...	...		
8.	sw <sup>1</sup> by w <sup>1</sup>	3	b	0	30.357	49.8	48.8	93	...	0	...	...	...		
10.	sw <sup>1</sup> by w <sup>1</sup>	2	b	0	30.357	49.8	47.8	86	...	0	...	...	...		
Midt.	sw <sup>1</sup> by w <sup>1</sup>	2	b	0	30.340	48.8	46.8	86	...	0	...	...	...		
Totals.	...	31	bc	...	4148	39.6	115.6	925	24	...	...	...	Cir str.		Cum.
Mean.	sw by w.	3		0	30.346	53.3	49.6	77	58	0					

## SUNDAY, 19TH.

2.	sw by e.	1	b	...	30.349	48.8	47.8	93	...	0	...	...	...	...	At Gibraltar.
4.	sw by e.	2	b	...	30.351	49.3	47.8	90	...	0	...	...	...	...	
6.	sw by w	2	bc	...	30.343	49.8	49.8	100	...	2	...	...	Cum.	...	
8.	sw by w	2	bc	...	30.387	49.8	49.8	100	...	2	...	...	Cum.	...	
10.	sw by w	3	bc	...	30.373	49.8	49.8	100	...	2	...	...	Cum.	...	
Noon.	sw by w	4	bc	...	30.363	49.8	49.8	100	...	2	...	...	Cum.	...	
2.	sw by n.	5	bc	...	30.311	56.8	54.8	87	...	4	...	...	Cum.	...	
4.	sw by n.	4	bc	...	30.298	55.8	53.8	87	...	4	...	...	Cum.	...	
6.	sw by n.	3	bc	...	30.299	55.3	53.8	90	...	4	...	...	Cum.	...	
8.	sw by n.	3	bc	...	30.297	55.0	54.8	98	...	5	...	...	Cum.	...	
10.	sw by w.	4	bc	...	30.281	55.3	54.8	97	...	6	...	...	Cum.	...	
Midt.	sw by w.	5	oq	...	30.259	54.8	54.8	100	...	10	...	...	Cum.	...	
Totals.	...	38	bc	...	3911	30.3	21.6	62	...	41	...	...	...	Cum.	
Mean.	sw by n.	3		...	30.326	52.5	51.8	95	...	3	...	...	...	...	

## MONDAY, 20TH.

2.	w by s.	4	cqr	...	30.215	54.8	53.8	93	...	10	...	...	Cum.	...	At Gibraltar.  Heavy squalls from W.S.W
4.	w by s.	5	cqr	...	30.186	53.8	52.3	90	...	10	...	...	Cum.	...	
6.	w by s.	4	cqr	...	30.128	52.8	51.8	93	...	10	...	...	Cum.	...	
8.	w by s.	5	cqr	...	30.140	52.8	51.8	93	...	10	...	...	Cum.	...	
10.	w by s.	6	bcqr	...	30.123	53.8	53.8	100	...	8	...	...	Cum.	...	
Noon.	sw by w.	7	bcqr	...	30.075	54.3	54.3	100	...	10	...	...	Cum.	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
4.	sw by w.	5	cqr	...	30.036	54.8	54.8	100	...	10	...	...	Cum.	...	
6.	w by s.	5	bcqr	...	30.048	56.8	55.8	93	...	8	...	...	Cum.	...	
8.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
10.	w by s.	6	oql	...	29.945	57.8	56.8	93	...	10	...	...	Cum.	...	
Midt.	w by s.	4	oq	...	29.912	56.8	56.8	100	...	10	...	...	Cum.	...	
Totals.	...	51	cqr	...	808	48.5	42.0	55	...	96	...	...	...	Cum.	
Mean.	w by s.	5		...	30.081	54.8	54.2	95	...	9	...	...	...	...	

## TUESDAY, 21st JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w½s.	5	odq	...	29.923	56.8	55.8	93	...	...	...	Cum.	At Gibraltar.
4.	swb½w	6	beq	...	29.923	55.8	53.8	87	...	...	...	Cum.	
6.	sw½s.	4	beq	...	29.937	56.3	54.8	90	...	6	Str.	Cum.	
8.	sw½s.	3	be	...	30.020	56.0	54.8	91	...	8	Str.	Cum.	
10.	sw½s.	4	be	...	30.049	56.8	54.8	87	...	8	...	Cum.	
Noon.	swb½w	3	be	...	30.076	56.8	54.8	87	...	8	Str.	Cum.	
2.	sw½s.	3	be	...	30.041	58.8	55.3	79	...	4	Str.	Cum.	
4.	sw½w.	3	be	...	30.054	56.8	54.8	87	...	2	...	Cum.	
6.	swb½w	12	b	...	30.077	55.8	53.8	87	...	0	...	...	
8.	sw½s.	1	b	...	30.110	54.8	52.8	87	...	0	...	...	
10.	sw½s.	1	be	...	30.127	55.8	54.8	93	...	7	...	Cum.	
Midt.	sw½s.	1	be	...	30.142	54.8	52.8	87	...	5	...	Cum.	
Totals.	...	36		...	479	75.3	53.1	1055	...	48			
Mean.	swb½w.	3	be	...	30.040	56.3	54.4	88	...	5	Str.	Cum.	

## WEDNESDAY, 22d.

2.	sw½s.	2	be	...	30.139	52.8	51.8	93	...	3	...	Nimb. Str.	At Gibraltar.
4.	sw½s.	2	be	...	30.139	52.8	51.8	93	...	2	...	...	
6.	sw½s.	1	be	...	30.145	52.8	51.8	93	...	...	...	...	
8.	swb½w.	1	be	...	30.152	52.8	51.8	93	...	8	...	Cum.	
10.	swb½w.	1	be	...	30.165	56.8	55.8	93	...	4	...	Cum.	
Noon.	swb½w.	1	be	...	30.167	56.8	55.8	93	...	4	...	Cum.	
2.	sw½s.	2	be	...	30.167	57.8	56.3	90	...	8	...	Cum.	
4.	sw½s.	2	be	...	30.122	56.8	55.8	93	...	4	...	Cum.	
6.	swb½w.	1	be	...	30.187	56.8	55.8	93	...	6	...	Cum.	
8.	swb½w.	1	be	...	30.187	56.3	55.3	93	...	7	...	Cum.	
10.	swb½w.	1	be	...	30.202	56.8	55.8	93	...	3	...	Nimb.	
Midt.	swb½w.	1	ocr	...	30.176	56.3	55.8	96	...	10	...	Nimb.	
Totals.	...	16		...	1888	65.6	53.6	36	...	59			
Mean.	swb½s.	1	be	...	30.157	55.5	54.5	93	...	5		Cum. & Nimb.	

## THURSDAY, 23d.

2.	swb½w.	1	be	...	30.189	55.3	54.8	97	...	3	...	Nimb.	At Gibraltar.
4.	swb½w.	1	b	...	30.198	54.8	53.8	93	...	0	...	...	
6.	swb½w.	1	b	...	30.210	54.8	53.8	93	...	0	...	...	
8.	swb½w.	1	b	...	30.201	55.8	54.8	93	...	0	...	...	
10.	swb½w.	1	be	...	30.194	59.8	57.8	88	...	4	...	Cum.	
Noon.	swb½w.	1	be	...	30.193	59.8	57.8	88	...	5	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	swb½w.	2	be	...	30.156	58.8	57.8	94	...	5	...	Cum.	
6.	swb½w.	2	be	...	30.163	57.8	56.8	93	...	6	...	Cum.	
8.	swb½w.	1	be	...	30.174	56.8	55.8	93	...	4	...	Cum.	
10.	wb½s.	2	be	...	30.184	55.8	55.3	97	...	3	...	Cum.	
Midt.	sw½s.	1	be	...	30.182	54.8	54.8	100	...	2	...	Cum.	
Totals.	...	14		...	2044	74.3	63.3	39	...	32			
Mean.	s.w.	1	be	...	30.186	56.8	55.8	94	...	3		Cum.	

## FRIDAY, 24th JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds 0 to 10.	Description of Clouds		REMARKS
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NW½N.	1	be	...	30.195	54.8	53.8	93	...	3	...	...	At Gibraltar
4.	NW½N.	1	be	...	30.202	53.8	52.8	93	...	4	...	...	
6.	NW½N.	1	be	...	30.186	54.8	53.8	93	...	5	...	Cum str.	
8.	NW½N.	1	be	...	30.225	56.3	55.8	97	...	6	...	Cum.	
10.	NW½N.	1	be	...	30.216	56.8	56.8	100	...	5	...	Cum.	
Noon.	NW½N.	1	be	...	30.214	57.8	56.8	95	...	5	...	Cum.	
2.	NW½W.	1	be	...	30.175	53.8	52.8	88	...	6	...	Cum.	
4.	NW½W.	1	be	...	30.173	60.3	58.3	88	...	4	...	Cum.	
6.	NW½N.	1	be	...	30.160	56.8	56.8	100	...	2	...	Cum.	
8.	NW½N.	2	be	...	30.174	57.3	56.8	97	...	4	...	Cum.	
10.	NW½N.	2	be	...	30.174	56.8	56.3	97	...	4	...	Cum.	
Midt.	NW½N.	2	be	...	30.164	56.8	56.3	97	...	4	...	Cum.	
Totals.	...	21		...	2358	82.1	72.1	56	...	52	...		
Mean.	NW½N.	2	be	...	30.196	56.8	56.0	95	...	4	...	Cum.	

## SATURDAY, 25th.

2.	NW½W.	2	be	...	30.178	53.8	53.3	97	...	3	...	Cum.	At Gibraltar
4.	NW½W.	2	be	...	30.169	52.8	52.3	97	...	3	...	Nimb.	
6.	NW½N.	1	be	...	30.167	50.8	49.8	93	...	2	...	Nimb.	
8.	NW½W.	2	be	...	30.173	50.8	49.3	90	...	2	...	Str.	
10.	NW½W.	1	be	...	30.180	56.8	55.8	93	...	2	...	Cir.	
Noon.	NW½W.	2	be	...	30.182	56.8	53.8	81	...	2	...	Cir.	
2.	NW½W.	2	be	...	30.124	55.8	53.3	84	...	2	...	Cum.	
4.	NW½W.	2	be	...	30.106	54.8	52.8	87	...	1	...	Nimb.	
6.	NW½W.	1	be	...	30.108	52.8	51.8	93	...	3	...	Nimb.	
8.	NW½W.	2	be	...	30.124	52.3	49.8	83	...	4	...	Cum.	
10.	NW½N.	3	h	...	30.110	51.8	50.8	93	...	0	...	...	
Midt.	NW½N.	2	h	...	30.137	51.8	50.8	93	...	0	...	...	
Totals.	...	22	be	...	1758	41.1	23.6	4	...	24	...		
Mean.	NW½N.	2		...	30.146	53.4	52.0	90	...	2	Cir.	Cum. & Nimb.	

## SUNDAY, 26th.

2.	NW½N.	2	b	...	30.074	50.3	50.3	100	...	0	...	...	At noon, off Gibraltar.
4.	NW½N.	2	be	...	30.054	51.3	50.3	93	...	4	...	Cum.	
6.	NW½N.	2	be	...	30.039	51.8	49.8	87	...	4	...	Cir.	
8.	NW½N.	2	be	...	29.995	52.8	51.3	90	...	4	...	Cum.	
10.	NW½N.	2	be	...	30.063	55.3	53.8	90	...	8	...	Cum.	
Noon.	NW½N.	1	be	...	30.064	57.0	54.8	86	57	8	...	Cum str.	
2.	NW½W.	2	o	...	29.896	56.8	55.8	93	56	10	...	Cum.	
4.	Wb½S.	2	be	...	29.875	57.8	55.8	87	55	9	...	Cum.	
6.	Wb½S.	2	be	...	29.866	56.8	54.8	87	55	7	...	Cum.	
8.	Wb½S.	3	oc	...	29.833	56.8	56.8	100	56	10	...	Cum nimb	
10.	SW½W.	3	oc	...	29.824	55.8	54.3	90	57	10	...	Cum.	
Midt.	SW½W.	2	op	...	29.778	53.8	53.8	100	57	10	...	Cum.	
Totals.	...	25	be	...	11361	56.3	41.6	1103	43	84	...		
Mean.	Wb½N.	2		...	29.947	54.7	53.5	92	56.1	7	Cir.	Cum.	

At 9 A.M., left Gibraltar for swinging ship, and, after finishing swinging, at 6 P.M. proceeded out of the straits for Madeira.

## MONDAY, 27TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, 80 to 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s. w.	4	ocqr	0	29.744	52.8	52.8	100	57	10	...	Nimb.	At noon, lat. 35° 30' N. long. 6° 24' W.  Heavy rain.  3 P.M., hail squall from W.N.W.  4.30 P.M., heavy rain squall.  Passing showers from S P.M. to Midt. Sea slightly phosphorescent.
4.	w.	3	ocp	0	29.768	52.8	52.8	100	56	8	...	Cum str.	
6.	swb w.	3	bc	1	29.758	54.8	53.8	93	56.5	8	...	Cum.	
8.	swb w.	3	bc	2	29.784	55.3	54.8	97	...	8	...	Cum.	
10.	swb w.	4	bc	2	29.866	55.8	54.8	93	57	4	...	Cum.	
Noon.	W.N.W.	4	bc	2	29.819	56.3	55.3	93	59	4	...	Cum.	
2.	W.N.W.	4	bc	2	29.832	55.3	54.8	97	59.5	6	...	Cum str.	
4.	W.N.W.	4	bc	1	29.856	54.3	52.8	90	59.5	6	...	Cum str.	
6.	W.N.W.	4	bc	0	29.861	54.3	53.3	93	60	6	...	Cum.	
8.	W.N.W.	4	bc	1	29.902	53.8	52.8	93	57.5	5	...	Cum.	
10.	W.N.W.	4	bc	2	29.959	53.8	52.8	93	58	5	...	Cum.	
Midt.	N.N.W.	12	bc	2	29.954	53.8	52.8	93	59	6	...	Nb & Cum.	
Totals.	...	39	bc	15	10103	53.1	43.6	55	89	76	...	Cum., Cum str., & Nimb.	
Mean.	W.N.W.	3		1	29.842	54.4	53.6	95	57.4	6	...		

## TUESDAY, 28TH.

2.	N.N.W.	12	bc	...	29.947	55.8	53.8	87	58.5	4	...	Nimb.	At noon, lat. 35° 47' N. long. 8° 23' W.  Swell from W.S.W.
4.	N.N.W.	12	bc	...	29.959	55.8	53.8	87	57.5	8	...	Cum.	
6.	N.N.W.	12	bc	...	30.004	54.3	54.3	100	58.5	8	...	Cum.	
8.	N.N.W.	12	bc	...	30.049	55.8	54.8	93	60	8	...	Cum.	
10.	N.W.	4	cp	2	30.043	54.3	53.8	97	60	10	...	Nimb.	
Noon.	N.N.W.	12	bc	2	30.046	58.3	56.3	87	60	5	...	Cir cum.	
2.	N.N.W.	1	bc	1	30.061	57.8	55.8	87	61	3	...	Cum str.	
4.	Calm.	0	bc	1	30.139	58.3	56.8	90	61	3	...	Cum str.	
6.	Calm.	0	bc	0	30.063	56.8	54.8	87	60	3	...	Cum.	
8.	Calm.	0	bc	0	30.063	56.3	53.8	84	60	3	...	Cum.	
10.	Calm.	0	bc	0	30.063	55.8	53.8	87	60	4	...	Cum str.	
Midt.	Calm.	0	bc	0	30.063	56.3	54.3	87	59.2	4	...	Cum str.	
Totals.	...	15	bc	8	590	75.6	56.1	113	115.7	63	...	Cum str.	
Mean.	N.N.W.	1		1	30.042	56.3	54.7	89	59.6	5	...		

## WEDNESDAY, 29TH.

2.	W.S.W.	12	bc	0	30.037	56.3	53.3	81	59	4	Cir str.	...	At noon, lat. 36° 16' N. long. 10° 14' W.  3 P.M., heavy nimbus to westward.
4.	swb s.	12	bc	1	30.016	55.8	53.3	84	58.5	4	...	Cum str.	
6.	s. w.	12	bc	1	30.007	53.8	52.8	93	59	4	...	Cum str.	
8.	s. w.	12	bc	1	30.019	55.8	53.3	84	60	4	...	Cum str.	
10.	swb s.	12	bc	2	30.019	57.8	55.3	84	59	8	...	Cum str.	
Noon.	swb s.	12	bc	1	29.963	58.8	55.8	82	59	8	...	Cum str.	
2.	swb s.	3	bc	1	29.942	58.8	56.8	88	57.5	8	...	Cum str.	
4.	s. s. w.	2	bc	1	29.921	58.8	56.8	88	57	8	...	Cum str.	
6.	s. s. w.	3	clp	1	29.941	57.8	56.8	93	57	9	...	Cum str.	
8.	s. s. w.	2	oc	1	29.945	58.3	57.8	97	57.7	10	...	Cum str.	
10.	s. s. w.	3	op	1	29.926	57.8	57.3	97	58	10	...	Cum str.	
Midt.	s. s. w.	4	bc	1	29.897	57.3	56.3	93	58.5	4	...	Str.	
Totals.	...	29	bc	12	11633	87.1	65.6	104	100.2	81	...	Cir str.	
Mean.	s. s. w.	2		1	29.969	57.3	55.5	89	58.4	7	...		

## THURSDAY, 30TH JANUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.	1	oe	1	29.872	58.8	57.8	94	58	5	...	Cum.	At noon, at. 36° 23' N. long. 11° 18' W. Current, N. 26° W. 15'.
4.	S.S.W.	2	oe	1	29.869	57.8	56.8	94	59	5	...	Cum.	
6.	S.S.W.	2	oe	2	29.921	57.8	55.8	88	59	7	...	Cum.	
8.	S.S.W.	1	c	1	29.921	57.8	56.8	94	59	6	...	Cum.	
10.	S.S.W.	2	be	1	29.969	58.8	58.3	97	60	4	...	Cum str.	
Noon.	S.S.W.	1	be	2	29.950	60.8	59.8	94	60	4	...	Cir cum.	
2.	S.S.W.	1	be	1	29.955	60.8	59.8	94	60	3	...	Cir cum.	
4.	S.S.W.	2	be	1	29.941	61.8	60.8	94	60	3	...	Cir cum.	
6.	w.	1	be	1	29.921	60.8	60.8	94	60	3	...	Cum.	
8.	w <sup>b</sup> s.	2	be	2	29.981	58.3	58.3	100	59	3	...	Cum.	
10.	w <sup>b</sup> s.	1	be	2	29.998	57.3	56.3	94	59	3	...	Cum.	
Midt.	N.W.	3	be	2	30.020	56.8	55.8	94	58	3	Cir.	Cum.	
Totals.	...	19	be	17	11318	197.6	97.1	51	111	49	Cir.	Cum.	
Mean.	S.W.	2		1	29.943	58.9	58.1	94	59.2	4			

## FRIDAY, 31st.

2.	s <sup>bw</sup> .	2	beq	2	30.046	56.8	56.8	100	59	4	...	Cum str.	At noon, lat. 35° 20' N. long. 13° 4' W. Current, W. 3'. Clouds rising from N. E.
4.	s <sup>bw</sup> .	3	beq	2	30.057	56.3	55.8	97	59	5	...	Cum str.	
6.	N. N. W.	1	beq	2	30.053	55.8	55.8	100	60	5	...	Cum.	
8.	N. N. W.	2	be	2	30.051	57.8	56.8	94	60	3	...	Cum.	
10.	N. N. W.	1	be	2	30.159	57.8	55.8	88	60	3	...	Cum.	
Noon.	N. N. W.	2	be	2	30.106	58.8	56.3	85	60	3	...	Cum.	
2.	N. N. W.	2	be	1	30.090	59.8	56.8	82	60	5	...	Cir cum.	
4.	N. W.	2	be	1	30.099	58.8	55.8	82	60	4	...	Cir cum.	
6.	N. N. W.	1	be	1	30.092	58.8	55.8	82	60	4	...	Cum.	
8.	S. W.	1	be	1	30.102	57.8	54.8	82	60	4	...	Cum.	
10.	Caln.	0	b	1	30.149	58.3	55.8	84	59	0	...	...	
Midt.	s <sup>w</sup> b <sup>w</sup> .	2	be	1	30.145	57.8	56.3	90	60	4	Cir str.	...	
Totals.	...	19	be	18	1149	94.6	72.6	106	717	44	Cir str.	Cum.	
Mean.	N. W.	2		1	30.096	57.9	56.0	89	59.7	4			

## SATURDAY, 1st FEBRUARY.

2.	swbw.	1	be	1	30.144	59.3	57.8	91	60	1	...	Cum.	At noon, lat. 34° 3' N. long. 14° 19' W. Current, S. 62° W. 3'.
4.	s.w.	2	be	2	30.124	59.3	57.8	91	60	3	...	Cum.	
6.	s.w.	2	be	1	30.121	59.8	58.8	94	60	4	...	Cum.	
8.	s.w.	2	be	2	30.146	59.8	58.8	94	60	3	...	Cum.	Cum str.
10.	s.w.	2	be	1	30.189	61.8	60.3	91	61	5	...	Cum str.	
Noon.	s.w.	2	be	1	30.162	62.8	60.8	88	61	4	Cir cum.	Str.	
2.	swbw.	2	be	1	30.144	64.0	62.0	88	61.5	7	Str.	Cum.	Rising swell.
4.	swbw.	2	c	2	30.160	64.0	62.8	92	61.7	8	...	Cum.	
6.	sbw.	2	be	1	30.113	62.8	62.8	100	62	6	...	Cum.	
8.	s.w.	2	be	1	30.211	62.8	61.8	94	62	2	...	Str.	
10.	s.w.	2	b	2	30.237	63.0	62.8	95	62	0	...	...	
Midt.	wbs.	2	be	2	30.217	62.8	62.8	100	61.7	3	...	Cum.	
Totals.	..	23	be	17	1968	22.2	9.3	42	12.9	46	Cir cum. & Str.	Cum.	
Mean.	s.w.	2		1	30.164	61.8	60.8	93	61.1	4			

## SUNDAY, 2D FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.	3	bc	1	30.211	63.5	63.3	99	62	12	...	Cum.	At noon, lat. 32° 31' N. long. 16° 14' W.  Nimbus working up from northward.  Land completely obscured by mist at intervals.  Moon greasy.
4.	w.	12	bc	1	30.196	62.8	61.8	94	62	7	...	Cum. & Nb.	
6.	w.	12	bc	1	30.204	63.8	62.8	94	62	6	...	Cum.	
8.	w.	1	bc	1	30.204	63.8	62.8	94	62	4	...	Cum.	
10.	w.	12	bc	2	30.313	61.8	60.8	94	63	7	...	Cum.	
Noon.	N. N. W.	12	bc	2	30.298	62.8	61.0	90	63	6	...	Cum.	
2.	W. N. W.	1	bc	1	30.286	63.5	62.3	93	64	5	...	Str.	
4.	W. N. W.	1	bcm	1	30.314	62.8	61.8	94	63.5	8	...	Str.	
6.	N.	1	c	1	30.310	62.8	59.8	82	63.5	5	...	Cum.	
8.	N. N. E.	12	bc	1	30.370	61.8	60.3	91	63.0	6	...	Cum.	
10.	N. N. E.	12	bcm	1	30.382	60.8	59.8	94	63	7	...	Str.	
Midt.	N. N. E.	12	bcm	1	30.402	60.8	59.8	94	63	7	...	Str.	
Totals.	...	20	bcm	14	3490	31.0	16.3	33	34	70	...	Cum. & Str.	
Mean.	N. W.	2		1	30.291	62.6	61.4	93	62.8	6	...	...	

## MONDAY, 3D.

2.	N. E.	3	bc	1	30.370	61.3	59.3	88	62	5	...	Cum str.	At Madeira.  Arrived at Madeira at 11 A. M.
4.	E. by N.	2	bc	1	30.368	61.8	59.8	88	62.5	3	...	Cum str.	
6.	Calm.	0	bc	1	30.340	61.8	59.8	88	62.8	3	...	Cum.	
8.	E. by N.	2	bc	1	30.410	62.8	61.8	94	62.8	3	...	Cum.	
10.	E. by N.	2	bc	1	30.424	63.8	62.8	94	63.0	3	...	Cum.	
Noon.	E. by N.	2	bc	...	30.412	63.8	62.8	94	64.0	...	...	Cum.	
2.	W. S. W.	1	bc	...	30.383	65.8	60.8	73	...	8	...	Cum.	
4.	W. S. W.	1	bc	...	30.394	64.8	59.8	73	...	6	Str.	Cum.	
6.	Variable	0-1	bc	...	30.418	62.8	59.8	82	...	7	...	Cum.	
8.	Calm.	0	bc	...	30.436	60.8	58.8	88	...	1	...	Cum.	
10.	Calm.	0	bc	...	30.441	58.3	56.8	91	...	1	...	Cir cum.	
Midt.	Calm.	0	bc	...	30.438	58.3	56.8	91	...	1	...	Cir cum.	
Totals.	...	14	bc	5	4834	26.1	119.1	1044	17.1	41	...	Str.	Cum.
Mean.	Variable.	1		1	30.403	62.2	59.9	87	62.8	3	...	...	

## TUESDAY, 4TH.

2.	Calm.	0	bc	...	30.444	57.3	55.8	91	...	1	Str.	Cum.	At Madeira.
4.	Calm.	0	b	...	30.431	56.8	54.8	87	...	0	...	...	
6.	Calm.	0	b	...	30.420	56.8	55.3	90	...	0	...	...	
8.	Calm.	0	bc	...	30.450	61.8	60.3	91	...	1	Str.	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	Calm.	0	bc	...	30.442	63.8	59.8	77	...	3	...	Cum str.	
2.	Calm.	0	bc	...	30.426	68.8	63.8	73	...	1	Cir.	...	
4.	E. S. E.	2-3	bc	...	30.430	69.8	64.8	73	...	1	Cir.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	Variable.	1	bc	...	30.466	58.3	57.0	92	...	1	Str.	...	
10.	Calm.	0	bc	...	30.447	56.8	55.0	89	...	2	Str.	...	
Midt.	N. N. E.	1	bc	...	30.461	56.3	53.8	84	...	2	Str.	...	
Totals.	...	...	bc	...	4417	6.5	80.4	847	...	12	Cir str.	Cum str.	
Mean.	Variable.	0		...	30.442	60.6	58.0	85	...	1	...	...	

## WEDNESDAY, 5TH FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. 100.			Upper.	Lower.	
2.	W.S.W.	1	bc	...	30.427	55.3	53.3	87	...	...	...	...	At Madeira.
4.	Cal'm.	0	bc	...	30.437	54.8	53.8	93	...	...	...	...	
6.	Cal'm.	0	bc	...	30.437	54.8	53.8	93	...	3	...	Str.	
8.	Cal'm.	0	bc	...	30.466	61.8	59.8	88	...	1	...	Str.	
10.	E.S.E.	1	b	...	30.467	63.3	60.8	85	...	0	...	...	At 2.30 P.M., left Madeira for Tenerife.
Noon.	W.S.	1	bc	...	30.453	63.8	60.8	82	63.8	2	...	Cum.	
2.	E.N.E.	5	bc	...	30.443	63.8	60.8	82	63.0	3	...	Cum.	
4.	E.N.E.	4	bc	...	30.399	62.8	58.8	76	63.0	3	...	Cum.	
6.	N.E.	5	bc	2	30.343	62.8	58.8	77	63.0	1	...	Cum.	
8.	P.N.	4	bc	2	30.386	60.3	57.8	85	63.0	1	...	Cum.	
10.	E.N.E.	5	bc	2	30.366	59.8	57.8	88	62.0	2	Cir.	Cum.	
Midd.	S.E.	4	bc	2	30.354	60.3	57.3	82	62.5	3	Cir.	Cum.	
Totals.	...	30	bc	8	4978	3.6	93.6	1018	20.3	19	Cir.	Cum. & Str.	
Mean. Variable.	...	3		2	30.415	60.3	57.8	85	62.9	2			

## THURSDAY, 6TH.

2.	N.E.	5	bc	2	30.308	60.3	58.3	88	62	3	Cir.	...	At noon, lat. 29° 43' N. long. 16° 47' W. Current, s. 76° W. 18'.	
4.	N.E.	5	bc	2	30.268	60.3	58.3	88	63	3	Cir.	...		
6.	N.E.	5	bc	2	30.241	59.8	58.8	94	62.5	3	Str.	Cum.		
8.	N.E.	6	bc	2	30.249	59.8	58.8	94	62.5	3	...	Cum.		
10.	N.E.	5	bc	2	30.252	59.8	58.8	94	63.0	2	Str.	Cum.		
Noon.	N.E.	4	bc	2	30.217	62.8	59.8	82	63.5	2	Str.	Cum.		
2.	N.E.	5	bc	2	30.190	64.8	60.8	78	62	4	...	Cum.		
4.	N.E.	6	bc	2	30.150	63.3	60.3	82	62	4	...	Cum.		
6.	N.E.	5	bc	2	30.110	62.8	59.8	82	62	4	...	Cum.		
8.	N.E.	6	bc	3	30.164	62.3	59.8	85	63	4	...	Cum.		
10.	N.E.	5	bc	3	30.118	62.3	59.8	85	62	5	...	Cum.	Towards midnight. showers.	Light passing
Midd.	N.E.	4	bcp	3	30.130	62.3	60.8	91	63	6	...	Cum.		
Totals.	...	61	bc	27	2397	20.6	114.1	1043	30.5	43	Cir str.	Cum.		
Mean.	N.E.	5		2	30.199	61.7	59.5	87	62.5	4				

## FRIDAY, 7TH.

2.	N.E.	4	bc	2	30.103	61.8	59.5	87	61.8	7	...	Cum.	At Tenerife.		
4.	N.E.	3	bcp	2	30.083	61.3	59.8	91	62.0	7	...	Cum.			
6.	N.E.	4	bcp	...	30.083	61.8	59.8	88	63.0	7	...	Cum.			
8.	N.E.	3	bc	...	30.024	...	...	...	...	6	...	Cum.	Anchored at Santa Cruz at 8 A.M.		
10.	N.E.	3	bcp	2	...	...	...	...	...	7	...	Cum.			
Noon.	N.N.E.	2	bc	2	...	...	...	...	...	6	...	Cum.			
2.	N.N.E.	2	bcp	...	...	...	...	...	...	8	...	Cum.			
4.	N.E.	3	bcp	...	30.049	62.5	59.5	82	...	7	...	Cum.			
6.	...	...	...	...	...	...	...	...	...	...	...	...			
8.	N.N.E.	2	bcp	...	30.066	61.3	58.8	85	...	6	...	Cum.			
10.	N.E.	3	bcp	...	30.082	60.3	57.3	82	...	6	...	Cum.			
Midd.	N.	2	bcp	...	30.070	58.5	56.5	88	...	6	...	Cum.			
Totals.				...	31	bcp	8	569	7.5	61.2	43	6.8		73	...
Mean.				N.E.	3		2	30.070	61.1	58.7	86	62.3	7		

SATURDAY, 8TH FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer, reduced to 32° and Sea Level	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N. N. E.	1	bep	...	30.081	58.8	56.8	88	...	6	...	Cum.	At Tenerife.
4.	N. N. E.	2	bep	...	30.111	57.8	55.8	87	...	6	...	Cum.	
6.	N. N. E.	1	be	...	30.010	58.8	56.3	85	...	6	...	Cum.	
8.	Calm.	0	be	...	30.070	58.8	55.8	82	...	6	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	9 P.M., upper clouds from W.S.W., lower from E.S.E.
Noon.	N.E <sup>1</sup> /N.	2	be	...	30.045	63.5	57.5	67	...	2	Str.	Cum.	
2.	N.E <sup>1</sup> /N.	3	be	...	30.046	63.8	57.8	67	...	2	Str.	Cum.	
4.	N.E <sup>1</sup> /N.	2	be	...	30.056	63.8	57.8	67	...	2	...	Cum.	
6.	N.E <sup>1</sup> /N.	2	be	...	30.041	60.8	55.8	72	...	3	...	Cum.	
8.	Variable.	1	be	...	30.029	58.8	54.8	76	...	3	Str.	...	
10.	Variable.	0	be	...	30.056	57.8	55.8	87	...	3	Str.	Cum.	
Midd.	Variable.	1	be	...	30.076	57.8	53.8	76	...	3	Str.	Cum.	
Totals.	...	15	be	...	621	0.5	68.0	854	...	42	Str.	Cum.	
Mean.	NNE <sup>1</sup> /E.	1		...	30.057	60.0	56.2	78	...	4			

SUNDAY, 9TH.

2.	N.E <sup>1</sup> /N.	1	...	...	30.061	57.8	53.8	76	...	...	...	...	At Tenerife.
4.	N.E <sup>1</sup> /N.	1	...	...	30.071	56.8	53.8	81	...	...	...	...	
6.	Calm.	0	be	...	30.066	57.8	55.8	87	...	5	...	Cum.	
8.	Calm.	0	be	...	30.015	57.8	55.8	87	...	1	...	Cum.	
10.	Calm.	0	be	...	30.046	58.8	56.8	88	...	4	Str.	Cum.	9 to 10 P.M., upper scud from S.S.W.
Noon.	E <sup>1</sup> N <sup>1</sup> /N.	1	be	...	30.078	62.8	58.8	77	...	4	Str.	Cum.	
2.	E <sup>1</sup> N <sup>1</sup> /N.	1	be	...	30.074	62.8	58.8	77	...	2	Str.	Cum.	
4.	E <sup>1</sup> N <sup>1</sup> /N.	2	be	...	30.060	62.8	58.8	77	...	3	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	Variable.	0	be	...	30.052	61.8	58.8	82	...	3	...	Cum.	
10.	Variable.	1	be	...	30.054	60.8	57.8	82	...	3	Cir.	Cum.	
Midd.	S <sup>1</sup> /E.	1	be	...	30.043	60.3	57.8	85	...	6	...	Cum.	
Totals.	...	8	be	...	620	0.3	76.8	19	...	31	Cir str.	Cum.	
Mean.	E <sup>1</sup> /N.	1		...	30.052	60.0	57.0	82	...	3			

MONDAY, 10TH.

2.	N. N. W.	1	be	...	30.029	57.3	55.3	87	...	2	Cum.	Cum str.	At noon, lat. 28° 37' N. long. 16° 6' W.
4.	N. N. W.	2	be	...	30.001	56.8	54.8	87	...	2	...	Str.	
6.	N. N. W.	1	be	...	30.066	58.8	57.8	94	...	1	...	Cum.	
8.	N. N. W.	1	be	...	30.061	64.8	62.8	88	64	2	...	Cum.	
10.	W. S. W.	3	be	1	30.072	62.8	60.8	88	64	3	...	Cum.	At 5.30 A.M. left Santa Cruz anchorage to obtain some soundings and tem- peratures in the vicinity of Canary Islands.
Noon.	swby.	2	be	1	30.047	65.3	62.3	83	64	5	Str.	Cum.	
2.	swby.	3	be	1	30.051	64.8	61.8	83	64	3	...	Cum.	
4.	swby.	2	be	1	30.098	63.8	59.8	77	64	2	...	Cum.	
6.	Calm.	0	be	1	30.019	64.8	60.8	78	65	3	...	Cum str.	Swell from the northward.
8.	N. N. W.	1	be	1	30.004	63.8	59.8	77	63	1	...	Str.	
10.	Variable.	0	be	1	30.027	63.3	61.3	88	63	4	Cir.	Cum.	
Midd.	S.S.E.	1	be	1	30.017	62.8	61.0	89	63.5	4	Cir.	Cum.	
Totals.	...	17	be	7	492	29.1	118.3	59	34.5	32	Cir str.	Cum. & Str.	
Mean.	sw.	2		1	30.041	62.4	59.9	85	63.8	3			

## TUESDAY, 11TH FEBRUARY 1873.

Hour.	Wind		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbyw.	1	bcm	...	30.030	62.8	60.8	88	63	8	Str.	Cum.	At noon, lat. 28° 20' N. long. 17° 31' W.
4.	swbyw.	1	bcm	...	30.010	63.3	60.3	82	63	6	...	Cum.	
6.	swbyw.	1	be	...	29.991	62.3	58.8	80	63	4	...	Cum.	Cumulus over hills.
8.	Calm.	0	be	...	29.999	62.8	59.8	82	63	4	...	Cum.	
10.	Calm.	0	be	...	30.022	65.8	61.8	78	65	4	Cir.	...	
Noon.	Calm.	0	be	...	30.002	65.8	63.8	88	65	4	Cir.	...	
2.	s.s.w.	1	be	...	29.946	67.3	61.3	83	65.5	3	...	Cum.	Clouds over Gomera island. Upper scud from w.s.w., lower from s.s.e. 10 P.M., two brilliant rings round the moon.
4.	s.s.w.	1	be	...	29.942	67.0	63.3	79	64.8	5	Cir.	Cum.	
6.	s.s.w.	1	be	...	29.924	64.8	60.3	75	64	5	Cir.	Cum.	
8.	s.s.e.	2	be	...	29.927	63.3	60.8	88	64.5	2	...	Cum str.	
10.	s.s.e.	3	be	...	29.937	62.8	61.8	94	64	2	Cir.	...	
Midt.	s.s.e.	2	be	...	29.917	63.8	60.8	82	63	8	Cir.	...	
Totals.	...	13	bcm	...	11647	51.8	16.6	999	47.8	55			
Mean.	s.s.w.	1		...	29.971	64.3	61.4	83	63.9	5	Cir.	Cum.	

## WEDNESDAY, 12TH.

2.	s.	1	ed	...	29.883	62.5	61.5	94	64	10	...	Cum.	At noon, lat. 28° 4' N. long. 17° 26' W.
4.	E <sup>by</sup> N.	2	er	...	29.877	57.8	57.0	95	63	10	...	Cum.	
6.	E.S.	1	erm	...	29.855	56.8	54.8	87	63	10	...	Cum.	Wind backed from s. to E.S.E.
8.	E.S.	2	erm	...	29.843	58.8	58.8	100	64	10	...	Cum.	
10.	E.S.	5	beq	2	29.885	60.8	60.3	97	64	10	...	Cum.	
Noon.	S <sup>E</sup> E <sup>by</sup> E.	3	be	1	29.883	63.8	62.3	91	65	10	...	Cum.	
2.	S <sup>E</sup> E <sup>by</sup> E.	4	...	...	29.904	64.8	63.8	94	65	...	...	...	
4.	S <sup>E</sup> E <sup>by</sup> E.	3	be	2	29.932	64.8	63.8	94	64	7	Cir cum.	...	
6.	S <sup>E</sup> E <sup>by</sup> E.	2	be	1	29.947	63.8	61.8	88	64	5	Cir.	Cum.	Cum & Nimb.
8.	S <sup>E</sup> E <sup>by</sup> E.	4	be	1	29.985	62.3	60.3	88	63	4	...	Cum & Nimb.	
10.	E <sup>by</sup> N.	5	beq	2	29.993	62.3	60.8	91	62.5	5	...	Cum.	
Midt.	NNE <sup>by</sup> E.	4	beq	2	29.996	61.8	58.3	80	62.5	5	Cir.	Cum.	
Totals.	...	56		11	10983	20.3	3.5	1099	44	86			
Mean.	E <sup>by</sup> S.	3	beqpm	2	29.915	61.7	60.3	92	63.7	8	Cir.	Cum. & Nimb.	

## THURSDAY, 13TH.

2.	NE <sup>by</sup> N.	5	be	2	30.013	61.8	59.8	88	64	3	Cum.	...	At Tenerife.
4.	NE <sup>by</sup> N.	4	be	2	30.009	61.8	58.8	82	64	7	Cir str.	Cum.	
6.	NNE <sup>by</sup> E.	4	...	...	...	...	...	...	...	...	...	...	S.A.M., anchored off Santa Cruz.
8.	NNE <sup>by</sup> E.	4	...	...	...	...	...	...	...	...	...	...	
10.	NNE <sup>by</sup> E.	4	beq	1	30.082	59.8	56.8	82	...	7	...	Cum.	
Noon.	N <sup>by</sup> E.	3	be	...	30.072	61.8	57.8	77	...	6	...	Cum.	
2.	N <sup>by</sup> E.	3	be	...	30.082	62.8	58.8	77	...	6	...	Cum.	
4.	N <sup>by</sup> E.	6	beq	...	30.045	68.8	64.3	73	...	5	Cir.	Cum str.	
6.	NNE <sup>by</sup> E.	3	beq	...	30.035	63.3	51.8	48	...	5	...	Cum str.	
8.	NNE <sup>by</sup> E.	4	be	...	30.041	62.8	56.8	67	...	...	...	...	
10.	NNE <sup>by</sup> E.	3	be	...	30.104	60.8	56.8	77	...	6	...	Cum.	
Midt.	NNE <sup>by</sup> E.	3	be	...	30.104	59.8	56.3	79	...	5	...	Cum.	
Totals.	...	45	beqpm	5	672	23.3	83.8	826	8	54			
Mean.	NNE.	4		2	30.061	62.1	57.6	75	64	5	Cir.	Cum. & Str.	

## FRIDAY, 14TH FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE <sup>1</sup> E.	2	cp	...	30.066	59.8	58.8	94	...	4	...	Cum.	At Tenerife.  7.30 P.M., left Tenerife for St Thomas island, West Indies. 9.0, upper clouds from s.s.w.
4.	NNE <sup>1</sup> E.	2	cp	...	30.069	59.8	57.8	88	...	5	...	Cum.	
6.	NNE <sup>1</sup> E.	1	be	...	30.110	58.8	56.3	85	...	7	...	Cum.	
8.	W.N.W.	1	bep	...	30.168	57.3	56.3	93	...	9	...	Cum.	
10.	N <sup>1</sup> W.	1	bep	...	30.192	59.8	57.8	88	...	5	...	Cum.	
Noon.	N <sup>1</sup> W.	2	bep	...	30.180	62.8	57.8	72	...	7	...	Cum.	
2.	NNE <sup>1</sup> E.	2	be	...	30.190	62.8	57.8	72	...	7	...	Cum.	
4.	NNE <sup>1</sup> E.	2	be	...	30.210	62.8	58.8	77	...	7	...	Cum.	
6.	NNE <sup>1</sup> E.	2	bep	...	30.220	62.3	56.8	70	...	7	...	Cum str.	
8.	E <sup>1</sup> N <sup>1</sup> N.	2	be	1	...	...	...	64	9	...	...	...	
10.	E.N.E.	2	be	1	30.188	61.3	58.8	85	63	9	...	Cum.	
Midd.	E.N.E.	4	be	2	30.150	60.8	58.8	88	62	8	...	Cum.	
Totals.	...	23	beqp	4	1743	8.3	85.8	912	9	84	...	Cum.	
Mean.	NE <sup>1</sup> N.	2		1	30.145	60.7	57.8	76	63	7	...	Cum.	

## SATURDAY, 15TH.

2.	NE <sup>1</sup> E.	4	be	2	30.113	60.8	57.3	79	61.5	6	Cir.	Cum.	At noon, lat. 27° 22' N. long. 16° 57' W. Current, s. 75° w. 8'. Upper clouds from s.w.
4.	NE <sup>1</sup> E.	3	be	2	30.194	60.3	55.8	73	62.5	9	...	Cum.	
6.	NNE <sup>1</sup> E.	3	be	2	30.156	60.5	55.8	72	62.5	6	Cir.	Cum.	
8.	NE <sup>1</sup> E.	3	be	1	30.166	62.8	58.8	77	64.5	5	...	Str.	12.30 to 2 A.M., movement of clouds irregular. Sp. gr. 1.02731.
10.	...	...	...	...	...	63.3	58.8	75	...	...	...	...	
Noon.	NE <sup>1</sup> E.	3	be	2	30.150	63.5	58.8	74	64.0	5	Cir.	Cum.	
2.	E <sup>1</sup> N <sup>1</sup> N.	2	be	1	30.114	60.3	59.8	97	64.5	4	Cir.	Cum.	Clouds working up from s.  Rain squalls working up.
4.	E <sup>1</sup> N <sup>1</sup> N.	2	be	1	30.108	59.8	59.3	97	63.5	4	Cir.	Cum.	
6.	E <sup>1</sup> N <sup>1</sup> N.	2	be	1	30.124	61.8	57.3	75	63.0	6	...	...	
8.	NNE <sup>1</sup> E.	1	be	1	30.155	61.8	57.8	77	64.0	8	...	Str.	
10.	N <sup>1</sup> E.	1	be	1	30.154	61.8	57.8	77	64.0	5	Cir.	Cum.	
Midd.	N <sup>1</sup> E.	1	be	1	30.112	61.8	57.8	77	63.0	7	Cir.	Cum.	
Totals.	...	25	be	15	1546	18.5	95.1	90	37.0	65	Cir.	Cum. & Str.	
Mean.	N.E.	2		1	30.140	61.5	57.9	78	63.4	6	...	Cum.	

## SUNDAY, 16TH.

2.	N.W.	1	cp	0	30.098	61.8	57.8	77	63	9	...	Cum.	At noon, lat. 26° 40' N. long. 17° 53' W. Current, s. 45° w. 19'.
4.	NW <sup>1</sup> N.	1	be	0	30.100	61.3	57.8	80	62.5	7	...	Cum.	
6.	NW <sup>1</sup> N.	1	e	0	30.110	60.8	57.8	82	62.8	8	...	Cum.	
8.	W.	1	be	0	30.110	61.8	58.8	82	63	6	...	Cum.	Upper clouds from W.N.W. Wind very variable from 2 to 4 A.M. Sp. gr. 1.02734.
10.	N.W.	3	be	1	30.142	62.8	58.8	77	65	6	Cir.	Cum str.	
Noon.	N.W.	2	be	1	30.116	63.8	58.8	72	65	5	Cir.	Cum.	
2.	N.N.W.	3	be	1	30.100	62.8	58.8	77	64	6	Cir cum.	...	Rain squalls working up.
4.	N.N.W.	2	e	2	30.108	62.8	59.8	82	64	8	...	Nb. to s.	
6.	N.	3	be	2	30.126	62.3	57.8	75	64	4	Str.	Cum.	
8.	N.	3	be	2	30.158	62.3	58.8	80	61	1	Cir.	Cum.	
10.	N.	4	be	1	30.168	62.8	58.8	77	61	3	Cir.	Cum.	
Midd.	N.	3	be	1	30.178	62.8	57.8	72	65	2	Cir.	Cum.	
Totals.	...	27	be	11	1514	28.1	101.6	93	46.3	65	Cir str.	Cum.	
Mean.	NW <sup>1</sup> N.	2		1	30.126	62.3	58.5	78	63.9	5	...	Cum.	

## MONDAY, 17TH FEBRUARY 1873.

	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.	3	bc	12	30.100	62.8	58.8	77	65	4	...	Cum.	At noon, lat. 25° 52' s. long. 19° 24' w. Current, s. 11° w. 10.
4.	N.	12	bc	...	30.120	62.8	58.3	75	65	6	...	Cum.	
6.	N.E.	12	bc	1	30.140	61.8	58.8	82	65	5	...	Cum.	
8.	N.N.E.	12	bc	1	30.146	63.3	58.8	75	66	4	...	Cum str.	Sp. gr. 1.02712.
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	N.N.E.	12	bc	...	30.132	65.3	59.8	71	66.5	1	Cir str.	...	
2.	N.E.	1	bc	1	30.102	67.8	60.8	64	67	5	Cir.	Cum.	Clouds from N.N.E.
4.	N.E.	2	bc	1	30.102	65.8	58.8	64	67	5	Str.	Cum.	
6.	E.N.E.	2	bc	1	30.133	64.8	58.3	66	65.5	5	Cir.	Cum.	
8.	E.N.E.	2	bc	1	30.135	63.8	58.8	72	65.2	5	...	Cum str.	
10.	E.N.E.	2	bc	1	30.145	63.3	57.8	70	65	3	Cir.	Cum.	
Midd.	E.N.	2	bc	1	30.118	64.3	57.8	65	66	2	Cir.	Cum.	
Totals.	...	22	bc	12	1391	45.8	96.8	781	63.2	45	Cir str.	Cum. & Cum str.	
Mean.	N.E.	2		1	30.126	64.2	58.8	71	65.7	4	...	...	

## TUESDAY, 18TH.

2.	E.	1	bc	1	30.101	64.3	58.8	70	65	5	...	Cum.	At noon, lat. 25° 45' s. long. 20° 12' w. Current, w. 9°.
4.	E.S.E.	3	bc	1	30.076	63.8	59.8	77	65	5	...	Cum.	
6.	W.S.W.	1	bc	1	30.093	63.8	60.8	82	65	9	...	Cum.	
8.	Calm.	0	bc	1	30.105	66.8	62.3	76	66	7	...	Cum str.	Sp. gr. 1.02722.
10.	Calm.	0	bc	1	30.102	66.8	62.8	78	66	4	...	Cum.	
Noon.	Calm.	0	bc	1	30.124	67.8	62.8	73	65	3	...	Cum.	
2.	Calm.	0	bc	...	30.115	71.8	64.8	65	65	1	...	Cum str.	
4.	Calm.	0	bc	...	30.158	69.8	62.8	65	64.5	1	...	Cum str.	
6.	W.S.W.	1	bc	1	30.099	66.8	60.8	68	67	2	Str.	Cum.	
8.	S.W.	0	bc	1	30.102	65.8	60.8	73	65	1	...	Cum.	
10.	W.S.W.	2	bc	...	30.122	65.8	59.8	68	66	1	...	Cum.	
Midd.	W.S.W.	2	bc	...	30.122	65.8	59.8	68	66	1	...	Cum.	
Totals.	...	10	bc	8	1319	79.1	16.1	863	65.5	40	Str.	Cum. & Cum str.	
Mean. Variable.	1			1	30.110	66.6	61.3	72	65.5	3			

## WEDNESDAY, 19TH.

2.	W.S.W.	2	bc	0	30.103	64.3	60.8	80	66.5	3	Cir.	Cum.	At noon, lat. 25° 28' s. long. 20° 22' w. Current, s. 24° w. 4°.
4.	W.S.	1	b	0	30.085	64.3	60.8	80	66	0	...	...	
6.	W.N.	2	bc	1	30.155	63.8	61.8	88	66	1	...	Cum.	
8.	W.N.	2	bc	1	30.178	65.8	62.8	83	66	2	...	Cum.	10. bank of cum str. around the horizon except to W.S.W. Sp. gr. 1.02723.
10.	Variable.	1	bc	0	30.217	68.3	63.8	76	67	3	...	Cum str.	
Noon.	Variable.	1	bc	0	30.171	67.8	63.8	78	66	2	...	Cum str.	
2.	Variable.	1	bc	0	30.119	66.8	63.8	83	67	2	...	Cum.	Swell from N.N.W.
4.	Variable.	1	bc	0	30.129	67.3	62.8	76	67	2	...	Cum.	
6.	N.N.W.	1	bc	1	30.179	66.8	62.8	78	67	3	...	Cum.	
8.	swb.	1	bc	2	30.208	66.8	63.3	81	66	5	...	Cum.	
10.	swb.	2	bc	1	30.209	65.8	64.3	91	65	4	...	Cum.	
Midd.	swb.	1	bc	1	30.210	65.3	63.3	88	65	7	...	Cum.	
Totals.	...	16	bc	7	1963	73.1	34.1	22	74.5	34	Cir.	Cum. & Cum str.	
Mean.	swb.	1		1	30.164	66.1	62.8	82	66.2	3			

## THURSDAY, 20TH FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbN.	2	bc	1	30.202	64.8	61.8	83	66	2	...	Cum.	At noon, lat. 24° 56' N. long. 21° 18' W.  Current, s. 28° w. 9'. Sea slightly phosphorescent. Swell from w.n.w. Sp. gr. 1.02730.
4.	swbW.	2	bc	1	30.182	64.8	61.8	83	65	4	...	Cum.	
6.	swbW.	3	bc	2	30.195	64.8	62.8	88	65.5	4	...	Cum.	
8.	N.N.E.	3	bc	...	30.229	64.8	61.8	83	66	4	...	Cum str	
10.	NE'E.	3	bc	1	30.230	65.8	62.8	83	67	2	...	Cum.	
Noon.	NE'E.	3	bc	1	30.227	66.8	62.8	78	67	1	...	Cum.	
2.	N.E.	3	bc	2	30.181	65.8	63.8	88	67	1	...	Cum.	
4.	NE'N.	4	bc	1	30.199	65.8	63.8	88	67	5	...	Cum.	
6.	N.	3	bc	1	30.198	66.8	62.8	78	67	4	...	Cum.	
8.	N.	3	bc	1	30.233	65.3	62.8	85	67	3	...	Cum.	
10.	N.E.	3	bc	1	30.278	65.8	62.8	83	66	4	...	Cum.	
Midd.	N.E.	4	bc	1	30.242	65.3	62.3	83	66	4	...	Cum.	
Totals.	...	34	bc	13	2596	66.6	32.1	43	76.5	39	...	Cum.	
Mean.	N.N.E.	3		1	30.216	65.5	62.7	84	66.4	3	...	Cum.	

## FRIDAY, 21st.

2.	NE'N.	3	bc	1	30.205	64.8	61.8	83	66.5	3	Cir.	Cum.	At noon, lat. 24° 22' N. long. 24° 11' W.  Current, s. 78° w. 14'.  Sp. gr. 1.02756.  Sea phosphorescent.
4.	N. E.	3	bc	1	30.223	64.8	61.8	83	66	5	...	Cum.	
6.	N. N. E.	3	bc	2	30.224	65.8	62.3	81	66	4	...	Cum.	
8.	N. N. E.	3	bc	2	30.232	66.8	62.8	78	66	3	...	Cum.	
10.	N. N. E.	4	bc	2	30.281	65.8	62.3	81	67	3	...	Cir cum.	
Noon.	N. N. E.	3	bc	2	30.252	66.8	62.8	78	67.5	7	...	Cum.	
2.	NE'N.	4	bc	2	30.184	67.8	64.8	83	67	4	Cir.	Cum.	
4.	NE'N.	4	bc	2	30.179	68.8	65.3	80	67	3	...	Cum.	
6.	N. N. E.	4	bc	2	30.175	66.8	64.8	88	67	3	...	Cum.	
8.	N. N. E.	5	bc	2	30.202	66.8	63.3	81	67	3	...	Cum.	
10.	N. N. E.	3	bc	2	30.182	65.8	63.8	88	66	6	...	Str.	
Mult.	N. N. E.	3	bc	2	30.194	65.8	63.3	86	65.5	6	...	Str.	
Totals.	...	42	bc	22	2533	76.6	39.1	30	78.5	50	Cir.	Cum. & Str.	
Mean.	N. N. E.	3		2	30.211	66.4	63.3	82	66.5	4			

## SATURDAY, 22d.

2.	N.N.E.	2	bc	2	30.180	65.8	64.3	91	66	5	...	Cum.	At noon, lat. 24° 15' N. long. 24° 59' w  Current, s. 78° w. 13'.  Sp. gr. 1.02753.
4.	N.E.	3	bc	2	30.152	65.8	64.8	94	66	5	...	Cum.	
6.	N.E.	3	bc	2	30.164	66.3	64.3	88	66	6	...	Cum.	
8.	N.E.	3	e	2	30.202	66.8	63.8	83	67	7	...	Cum.	
10.	N.E.	3	e	2	30.199	67.3	62.8	76	66.5	10	...	Cum.	
Noon.	N.N.E.	3	cm	2	30.134	67.8	63.8	78	67	10	...	Cum.	
2.	N.E.	3	cm	2	30.145	66.8	64.3	86	67	9	...	Str.	
4.	N.E.	3	bcm	2	30.140	66.8	64.8	88	67	9	...	Str.	
6.	N.E'E.	4	bcm	2	30.130	66.8	64.8	88	67	9	Str.	Cum.	
8.	N.E'E.	4	bcm	2	30.149	66.8	64.8	88	66.5	4	Str.	Cum.	
10.	N.E'E.	4	e	2	30.132	66.3	64.8	91	67	5	...	Cum.	
Midd.	N.E.	4	bc	2	30.123	66.3	63.8	86	67	4	...	Cum.	
Totals.	...	39	bcm	24	1850	79.6	51.1	103.7	80	83	Str.	Cum. & Str.	
Mean.	N.E.	3		2	30.154	66.6	64.3	86	66.7	7			

SUNDAY, 23<sup>d</sup> FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32 and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	3	bc	1	30.119	65.3	62.3	83	67	3	...	Cum str.	At noon, lat. 23° 22' N. long. 27° 49' W.  Current, s. 77° W. 9'.  Sp. gr. 1.02762.
4.	N.E.	3	bc	1	30.123	64.8	62.8	88	66	4	...	Cum str.	
6.	N.E.	4	bc	2	30.112	65.8	63.3	86	66	4	...	Cum.	
8.	N.E.	4	bc	2	30.178	66.3	63.8	86	66	5	...	Cum.	
10.	N.E.	3	bc	2	30.197	66.8	63.3	81	68	4	Str.	Cum.	
Noon.	N.E.	4	bc	2	30.134	67.8	64.8	83	68	4	Str.	Cum.	
2.	N.E.	5	bc	2	30.108	67.8	64.8	83	67	4	Str.	Cum str.	
4.	NNE $\frac{1}{2}$ E.	4	bc	3	30.108	68.3	64.8	81	68	4	...	Cum str.	
6.	NNE $\frac{1}{2}$ E.	6	bc	3	30.122	68.3	64.8	81	69.5	4	Str.	Cum str.	
8.	N.N.E.	5	bc	3	30.197	66.8	64.8	88	68	5	...	Cum.	
10.	N.N.E.	5	bc	3	30.171	66.8	64.3	86	67.5	4	Str.	Cum.	Totals.
Midt.	N.N.E.	5	bc	3	30.199	66.8	63.8	83	67	4	...	Cum.	
	...	51	bc	27	1798	81.6	47.6	49	88	49	Str.	Cum & Cum str.	
Mean.	N $\frac{1}{2}$ E.	4		2	30.149	66.8	64.0	84	67.3	4			

MONDAY, 24<sup>th</sup>.

2.	S.W.	6	bc	2	30.163	66.8	63.8	83	67	3	...	Cum.	At noon, lat. 23° 15' N. long. 30° 56' W.  Current, s. 61° W. 10'.  Sp. gr. 1.02765.
4.	S.W.	5	bc	2	30.123	65.8	61.8	78	67	3	...	Cum str.	
6.	S.W.	6	bc	2	30.129	66.3	62.3	78	67	4	...	Cum str.	
8.	S.N.E.	5	bc	2	30.139	66.8	62.8	78	67	3	...	Cum str.	
10.	S.W.	5	bc	2	30.154	67.8	62.8	73	68	3	...	Cum.	
Noon.	S.W.	5	bc	3	30.228	67.8	63.8	78	68	4	...	Cum.	
2.	S.W.	5	bc	3	30.215	67.8	64.3	81	68	5	...	Cum.	
4.	S.W.	5	bc	3	30.214	69.8	65.8	78	68	5	...	Cum.	
6.	S.E.	4	bc	3	30.194	67.8	64.8	83	68	6	...	Cum.	
8.	SE $\frac{1}{2}$ E.	6	bc	3	30.182	67.8	63.8	78	68	5	...	Cum str.	
10.	E.N.E.	5	bc	3	30.265	68.3	64.8	81	68	6	...	Cum.	Totals.
Midt.	E $\frac{1}{2}$ S.	5	bc	3	30.244	67.8	63.8	78	68	6	...	Cum.	
	...	62	bc	31	2250	90.6	44.6	947	92	53	...	Cum. & Cum str.	
Mean.	S.N.E.	5		3	30.187	67.5	63.7	79	67.7	4			

TUESDAY, 25<sup>th</sup>.

2.	E.N.E.	4	bc	3	30.267	67.3	64.3	83	67	7	...	Cum.	At noon, lat. 23° 12' N. long. 32° 56' W.  Current, s. 57° W. 21'.  Sp. gr. 1.02775.
4.	E $\frac{1}{2}$ N.	4	bc	3	30.183	66.8	62.8	78	67.5	6	...	Cum.	
6.	NE $\frac{1}{2}$ E.	4	bc	3	30.197	66.8	63.3	81	...	6	...	Cum.	
8.	N.E.	4	bc	3	30.226	67.8	64.8	83	...	3	...	Cum.	
10.	N.E.	4	bc	4	30.237	67.8	64.8	83	69	3	...	Cum str.	
Noon.	N.E.	5	bc	4	30.254	72.8	68.8	79	...	4	...	Cum str.	
2.	NE $\frac{1}{2}$ E.	5	bc	4	30.249	71.3	66.3	73	69	3	...	Cum.	
4.	NE $\frac{1}{2}$ E.	5	bc	4	30.229	71.0	66.3	74	68.5	3	...	Cum.	
6.	NE $\frac{1}{2}$ E.	5	bc	3	30.222	67.8	65.3	86	68	3	...	Cum.	
8.	N.N.E.	5	bc	3	30.224	67.8	63.8	78	68	3	...	Cum.	
10.	S.N.E.	5	bc	3	30.275	67.8	64.8	83	68.5	3	...	Cum str.	Totals.
Midt.	NE $\frac{1}{2}$ E.	6	bc	3	30.273	67.8	64.8	83	68	3	Cir str.	...	
	...	56	bc	40	2767	102.8	60.1	964	73.5	48	Cir str.	Cum. & Cum str.	
Mean.	N.E.	5		3	30.231	68.6	65.0	80	68.1	4			

## WEDNESDAY, 26TH FEBRUARY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. 100.	Temperature of Sea Surface, 0 to 10.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.	5	bc	3	30.224	67.8	64.8	83	68	4	Cir.	...	At noon, lat. 23° 23' N. long. 35° 10' W.
4.	E.	5	bc	4	30.219	67.8	65.8	88	68	3	...	Cum.	
6.	E.	4	bc	3	30.247	67.3	64.8	86	68	3	...	Cum.	
8.	E.	4	bc	3	30.247	68.3	65.8	86	68.5	3	...	Cum.	Current, s. 60° W. 14'.
10.	E.N.	5	bc	3	30.244	68.8	65.3	81	69	2	...	Cum.	
Noon.	E.N.	6	bc	3	30.239	75.3	69.3	72	...	2	...	Cum.	
2.	E.N.	5	bc	4	30.257	74.8	68.8	70	69	4	...	Cum str.	Sp. gr. 1.02781.
4.	E.N.	5	bc	4	30.206	73.8	67.8	70	70	4	...	...	
6.	E.S.E.	5	bc	4	30.191	69.8	66.3	81	70	3	...	Cum.	
8.	E.S.E.	5	bc	4	30.221	69.3	66.3	83	68.5	4	...	Cum.	
10.	E.N.	4	bc	4	30.239	68.8	65.8	83	69	4	...	Cum.	
Midt.	N.E.	4	bc	3	30.233	68.8	65.3	81	69	2	...	Cum.	
Totals.	...	57	bc	42	2749	120.6	70.1	4	97	40	Cir.	Cum.	
Mean.	E.	5		3	30.229	70.1	66.3	80	68.8	3			

## THURSDAY, 27TH.

2.	N.E.	5	bc	2	30.206	67.8	65.8	88	69.5	7	...	Cum.	At noon, lat. 23° 28' N. long. 36° 43' W. Current, s. 59° W. 8'.
4.	E.S.	4	bc	3	30.229	68.8	62.8	68	69	6	...	Cum str.	
6.	E.N.E.	4	bc	2	30.223	68.3	64.3	78	69	8	...	Cum.	
8.	S.E.N.E.	3	bc	2	30.225	69.8	64.8	73	69	9	...	Cum.	Wind puffy. Occasional slight showers.
10.	E.N.	4	bc	2	30.238	71.8	65.3	67	69	7	Cir.	Cum.	
Noon.	S.E.N.E.	4	bc	2	30.210	72.3	67.3	74	70	8	Cir.	Cum.	
2.	E.N.	4	bc	2	30.233	71.8	67.8	79	70	6	...	Cum.	Sp. gr. 1.02777.
4.	E.N.	3	bc	2	30.235	71.8	67.8	79	70	6	...	Cum.	
6.	E.N.	4	bc	2	30.243	70.8	68.8	88	70	6	...	Cum str.	
8.	E.N.	2	bc	2	30.206	70.8	67.3	81	69.5	7	...	Cum.	Light rain squalls from E.N. to N.E.
10.	N.E.	3	bc	2	30.188	68.3	66.3	88	70	7	...	Cum.	
Midt.	N.E.	3	bc	2	30.199	68.8	66.8	88	...	6	...	Cum.	
Totals.	...	43	bc	25	2635	1.1	75.1	951	105	83	Cir.	Cum.	
Mean.	E.S.	4		2	30.219	70.1	66.3	79	69.5	7			

## FRIDAY, 28TH.

2.	N.E.	5	bc	2	30.177	68.8	66.8	88	69.5	5	...	Cum.	At noon, lat. 23° 10' N. long. 38° 42' W. Current, s. 69° W. 12'.
4.	N.E.	6	bc	2	30.149	68.8	66.8	88	69	6	...	Cum.	
6.	N.E.	3	bc	1	30.169	68.8	66.8	88	69	3	...	Cum.	
8.	N.E.	4	bc	1	30.199	71.8	66.8	74	70	4	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	E.N.	3	bc	2	30.180	72.8	67.8	74	71	3	...	Cum.	
2.	E.N.	2	bc	2	30.179	72.3	67.3	74	71	2	...	Cum.	Sp. gr. 1.02778.
4.	E.N.	1	bc	2	30.188	71.3	65.8	71	71	1	...	Cum.	
6.	E.N.	1	bc	2	30.189	70.8	64.8	69	71	1	...	Cum.	
8.	E.N.	3	bc	2	30.206	71.8	66.8	70	71	3	...	Cum.	
10.	E.N.	2	bc	1	30.210	70.8	66.8	78	70	2	...	Cum.	
Midt.	E.N.	3	bc	1	30.209	70.0	66.3	80	70	3	...	Cum.	
Totals.	...	33	bc	18	2046	8.0	72.8	854	2.5	33	...	Cum.	
Mean.	E.N.E.	3		2	30.186	70.7	66.6	78	70.2	3			

## SATURDAY, 1st MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	4	bc	2	30.177	68.3	65.8	85	70	5	...	Cum.	At noon, lat. 22° 45' N. long. 40° 37' W.
4.	E.N.E.	4	bc	2	30.155	67.3	65.8	91	70	5	...	Cum.	Current, w. 12'.
6.	E.N.E.	4	bc	2	30.139	67.8	65.8	88	70	3	...	Cum.	3 A.M., squalls and light showers from E.
8.	E.N.E.	3	bc	2	30.089	68.8	65.8	83	71	3	...	Cum.	
10.	E.N.E.	4	bc	2	30.201	69.8	66.3	81	71	2	...	Cir.	
Noon.	E.N.E.	3	bc	2	30.200	71.8	66.8	74	72	2	...	Cir.	Sp. gr. 1.02772.
2.	E.N.E.	4	bc	2	30.160	72.8	67.8	71	71	2	...	Cum str.	
4.	E.N.E.	3	bc	2	30.182	72.8	67.8	71	71	2	...	Cum str.	Observed a whale.
6.	E.N.E.	3	bc	2	30.166	71.3	66.8	75	71	2	...	Cum.	
8.	E.N.E.	3	bc	2	30.220	71.8	66.8	74	71	2	...	Cum.	Light passing showers during first part
10.	E.N.E.	3	bc	2	30.206	70.8	65.8	73	71	2	...	Cum.	of first watch.
Midd.	E.N.E.	3	bc	2	30.214	69.8	64.8	73	71	6	...	Cum.	
Totals.		41	bc	24	2109	3.1	76.1	945	10	36	Cir.	Cum. & Cum str.	
Mean.	E.	3		2	30.176	70.3	66.3	79	70.8	3			

## SUNDAY, 2d.

2.	E.N.E.	3	bc	2	30.180	70.8	67.8	83	71	8	...	Cum.	At noon, lat. 22° 30' N. long. 42° 6' W.
4.	E.N.E.	2	bc	2	30.156	69.8	66.8	83	71	3	...	Cum str.	Current, s. 59° w. 11'.
6.	E.N.E.	2	bc	2	30.141	69.8	66.3	80	71	3	...	Cum.	
8.	E.N.E.	2	bc	2	30.187	71.3	67.3	78	71	2	...	Cum.	Wind unsteady from 1 to 1.30 A.M.
10.	E.N.E.	2	bc	2	30.179	71.8	67.8	79	71	2	...	Cum.	
Noon.	E.N.E.	2	bc	2	30.115	73.8	68.8	74	71	2	...	Cum str.	Sp. gr. 1.02780.
2.	E.N.E.	2	bc	2	30.120	72.8	67.8	74	71.5	2	...	Cum.	
4.	E.N.E.	2	bc	2	30.136	71.8	66.8	74	71	2	...	Cir.	
6.	E.N.E.	2	bc	1	30.136	70.8	65.8	73	71.5	3	...	Cum.	
8.	E.N.E.	2	bc	1	30.174	70.8	67.3	81	71	4	...	Cir.	
10.	E.N.E.	2	bc	1	30.183	70.8	66.8	78	71	3	...	Cum.	
Midd.	E.N.E.	2	bc	1	30.183	70.8	66.8	78	71	2	...	Cum.	
Totals.		25	bc	20	1890	15.1	86.1	95	10	36	Cir.	Cum. & Cum str.	
Mean.	E.	2		2	30.157	71.3	67.2	78	71.1	3			

## MONDAY, 3d.

2.	E.N.E.	3	bc	1	30.156	70.8	66.8	78	72	4	...	Cum str.	At noon, lat. 21° 57' N. long. 43° 29' W.
4.	E.N.E.	3	bc	1	30.160	70.3	66.8	80	72	5	...	Cum str.	Current, s. 74° w. 16'.
6.	E.N.E.	2	bc	1	30.166	69.8	66.8	83	72	6	...	Cum str.	
8.	E.N.E.	2	bc	1	30.186	71.8	67.8	79	73	3	...	Cum str.	
10.	E.N.E.	2	bc	1	30.219	73.0	68.8	78	73	3	...	Cum str.	
Noon.	E.N.E.	3	bc	2	30.193	73.8	68.8	74	71	7	...	Cir.	Sp. gr. 1.02765.
2.	E.N.E.	2	bc	2	30.213	72.8	68.8	79	71.5	3	...	Cum str.	
4.	E.N.E.	2	bc	2	30.218	72.8	67.8	74	72	2	...	Cum.	
6.	E.N.E.	2	bc	2	30.201	73.3	66.8	68	72	2	...	Str.	
8.	E.N.E.	3	bc	2	30.198	71.8	67.8	79	73	3	...	Cum str.	Clouds from S.W.
10.	E.N.E.	3	bc	2	30.226	71.3	66.8	76	71	4	...	Str.	
Midd.	E.N.E.	3	bc	2	38.210	71.8	67.8	79	71.5	3	...	Cum.	
Totals.	...	39	bc	19	2346	23.3	91.6	87	24	45	Cir str.	Cum. & Cum str.	
Mean.	E.N.E.	3		2	30.195	71.9	67.6	77	72	4			

## TUESDAY, 4TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Chills, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>h</sup> S <sup>h</sup> N.	3	bc	2	30.183	71.8	67.8	79	71	3	...	Cum.	At noon, lat. 21° 38' S. long. 44° 39' W. Current, S. 73° W. 16'.
4.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	2	30.183	71.8	67.8	79	71	2	...	Cum.	
6.	E <sup>h</sup> S <sup>h</sup> N.	3	bc	2	30.216	71.3	66.8	76	71	7	...	Cum str.	Sea slightly phosphorescent.
8.	E <sup>h</sup> S <sup>h</sup> N.	4	cq	2	30.226	71.8	66.8	74	72	10	...	Cum str.	
10.	N <sup>h</sup> E <sup>h</sup> S <sup>h</sup> N.	5	bc	2	30.243	72.8	68.8	79	72	3	...	Cum.	Overcast to S.S.W. Sp. gr. 1.02780.
Noon.	E <sup>h</sup> S <sup>h</sup> N.	4	bcp	3	30.242	75.3	69.8	72	72	8	...	Cum.	
2.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	3	...	73.8	68.8	74	71.5	3	...	Cum.	
4.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	3	30.204	74.8	69.8	74	71.5	3	...	Cum.	
6.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	3	30.178	73.8	69.8	79	71	3	...	Cum.	
8.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	3	30.230	73.8	69.8	79	71	3	...	Cum.	
10.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	3	30.261	71.8	67.8	79	71	2	...	Cum.	
Midt.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	3	30.247	71.8	67.8	79	71.5	3	...	Cum.	
Totals.	...	49		32	2413	34.6	101.6	83	16.5	50			Cum. & Cum str.
Mean.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	3	30.219	72.9	68.5	77	51.4	4	...		

## WEDNESDAY, 5TH.

2.	E <sup>h</sup> S <sup>h</sup> N.	4	bcp	2	30.233	71.8	67.8	79	72	3	...	Cum.	At noon, at lat. 21° S. long. 46° 30' W. Current, S. 37° W. 12'.
4.	N <sup>h</sup> E <sup>h</sup> E <sup>h</sup> E.	5	bc	2	30.220	71.3	66.8	76	72	3	...	Cum.	
6.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	2	30.254	70.8	66.8	78	72	4	...	Cum.	1.45 A.M., rain from E.N.E.
8.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	2	30.218	72.8	68.8	84	72	4	...	Cum.	
10.	E <sup>h</sup> S <sup>h</sup> N.	4	bc	2	30.269	75.8	68.8	67	74	5	...	Cum.	Sp. gr. 1.02758.
Noon.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	2	30.262	76.8	68.8	63	74	4	...	Cum.	
2.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	2	30.211	74.8	69.8	74	74	2	...	Cum.	8.30 P.M., rain squall from S.E.
4.	E <sup>h</sup> S <sup>h</sup> N.	5	bc	2	30.178	73.8	69.8	79	74	4	...	Cum.	
6.	E.N.E.	5	bc	2	30.216	72.8	67.8	74	74	4	...	Cum.	Cum str. Cir cum.
8.	E.N.E.	4	bc	2	30.210	71.8	67.8	79	74	8	...	Cum.	
10.	E.N.E.	4	bcp	2	30.263	72.8	67.8	74	72	9	...	Cum str.	
Midt.	E.N.E.	4	bc	2	30.261	71.8	65.8	69	72	5	...	Cir cum.	
Totals.	...	54		24	2775	37.1	97.6	56	36	55			Cum.
Mean.	E.N.E.	4	bcp	2	30.231	73.1	68.1	75	73	5	...		

## THURSDAY 6TH.

2.	E <sup>h</sup> N.	4	bcp	2	30.211	70.8	67.8	83	72	8	...	Cum. & Nb.	At noon, lat. 20° 49' S. long. 48° 45' W. Current, S. 69° W. 11'.
4.	E.N.E.	3	bcp	2	30.213	71.8	67.8	79	72	4	...	Cum.	
6.	E <sup>h</sup> N.	4	bc	2	30.246	70.3	65.8	76	72.5	4	...	Cum.	Squally in the forenoon, the force of wind in the squalls being 7.
8.	E <sup>h</sup> N.	3	bc	2	30.242	70.8	65.8	73	73	3	...	Cum.	
10.	E <sup>h</sup> N.	5	bcp	2	30.213	71.8	67.8	79	72.5	3	...	Cum.	Passed some gulf weed. Sp. gr. 1.02772.
Noon.	E <sup>h</sup> N.	5	bcp	2	30.183	72.8	68.8	79	72.5	3	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	4	...	...	Passing several patches of gulf weed.
4.	E <sup>h</sup> N.	4	...	...	30.208	73.8	69.8	79	72	4	...	Cum.	
6.	E <sup>h</sup> N.	5	...	...	30.220	73.3	69.3	79	72	4	...	Cum.	
8.	E <sup>h</sup> N.	4	bc	2	30.228	71.8	68.3	82	73	4	...	Cum.	
10.	E <sup>h</sup> N.	6	bcp	2	30.260	71.8	67.8	79	72.5	10	...	Cum.	
Midt.	E <sup>h</sup> N.	5	bcp	2	30.183	70.8	66.8	78	72.5	3	...	Cum.	
Totals.	...	47		18	2347	19.8	85.8	96	26.5	54			Cum.
Mean.	E <sup>h</sup> N.	4	bcp	2	30.213	71.8	67.8	79	72.4	5	...		

## FRIDAY, 7TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Eby.	4	bc	4	30.193	69.8	65.8	78	73	5	Cir cum.	...	At noon, lat. 20° 39' S. long. 50° 33' W. Current, S. 72° W. 7.
4.	Eby.	3	bc	4	30.183	70.8	66.8	78	73	4	...	Cum.	
6.	Eby.	4	bc	4	30.176	70.3	66.8	80	72	3	Cir cum.	...	
8.	Eby.	3	bc	3	30.206	71.8	67.8	79	74	4	Cir cum.	...	
10.	Eby.	4	bc	...	30.215	74.8	69.8	74	...	...	...	...	
Noon.	Eby.	3	bc	3	30.178	75.8	70.8	75	74	3	...	Cum.	
2.	Eby.	3	bc	3	30.148	76.8	71.8	75	71	2	...	Cum.	
4.	Eby.	3	bc	3	30.113	76.8	72.8	79	74	2	...	Cum.	
6.	Eby.	3	bc	3	30.178	72.8	68.8	79	74	4	...	Cum str.	
8.	Eby.	3	bc	3	30.198	72.8	68.8	79	74	4	...	Cum.	
10.	Eby.	3	b	2	30.180	72.3	68.8	82	73	0	...	...	
Midd.	Eby.	4	bc	2	30.180	72.3	68.3	79	73	1	...	Cum.	
Totals.	...	40		32	2148	37.1	107.1	97	38	32			
			bc								Cir cum.	Cum.	
Mean.	Eby.	3		3	30.179	73.1	68.9	78	73.4	3			

## SATURDAY, 8TH.

2.	E.S.	2	bc	2	30.180	71.8	67.8	79	73	1	...	Cum.	...	At noon, lat. 20° 9' S. long. 52° 18' W. Current, S. 73° W. 2.
4.	E.S.	3	bc	2	30.166	71.8	67.8	79	73	1	...	Cum.	...	
6.	E.S.	2	bc	2	30.133	71.8	68.8	84	74	3	...	Cum str.	...	
8.	E.S.	3	bc	3	30.160	72.8	69.8	84	74	4	Cir cum.	...	...	
10.	E.S.	2	bc	2	30.158	75.3	70.8	77	74	3	...	Cir cum.	...	
Noon.	E.S.	3	bc	3	30.160	75.8	71.8	79	74	3	...	Cir cum.	...	
2.	E.S.	2	bc	2	...	...	...	...	74	2	...	...	...	
4.	E.S.	2	bc	2	30.162	76.3	70.8	73	74	3	...	Cum.	...	
6.	E.S.	2	bc	2	30.163	76.3	71.8	77	74	3	...	Cum.	...	
8.	E.S.	2	bc	1	30.148	72.8	68.8	79	73	1	...	Cum.	...	
10.	E.S.	2	bc	1	30.168	72.8	68.8	79	73	1	...	Cum.	...	Sp. gr. 1.02777.
Midd.	E.S.	2	bc	1	30.163	72.8	66.8	79	73	1	...	Cir cum.	...	
Totals.	...	27		21	1581	40.3	103.8	90	43	26				
			bc									Cir cum.	Cum.	
Mean.	E.S.	2		2	30.144	73.7	69.4	78	73.6	2				

## SUNDAY, 9TH.

2.	E.	2	bc	1	30.162	72.3	67.8	77	73	2	...	Cum.	...	At noon, lat. 19° 57' S. long. 53° 45' W. Current, W. 18°.
4.	E.	2	bc	1	30.097	72.3	68.3	79	73	2	...	Cum.	...	
6.	E.	2	bc	1	30.100	72.8	67.8	74	73	2	...	Cum.	...	
8.	E.	2	bc	1	30.104	72.8	68.8	79	74	2	...	Cum str.	...	
10.	E.S.	2	bc	1	30.110	...	...	...	74	2	Cir cum.	...	...	
Noon.	E.S.	2	bc	1	30.130	73.8	69.8	79	...	2	...	...	...	
2.	E.S.	1	bc	1	30.118	75.8	70.8	75	74	2	Cir.	Cum.	...	
4.	E.S.	2	bc	1	30.152	76.8	71.3	73	74.5	2	Cir.	Cum.	...	
6.	E.S.E.	1	bc	1	30.128	74.3	69.8	77	73.5	4	Cir.	Cir cum.	...	
8.	E.S.	4	bcq	1	30.125	74.3	69.8	77	74	5	...	Cum.	...	
10.	E.S.	3	bc	1	30.180	72.8	68.8	79	73.5	4	Cir str.	...	...	Bright double ring round the moon.
Midd.	S.E.	2	bc	1	30.178	72.8	68.8	79	73.5	7	Cir str.	...	...	
Totals.	...	25		12	1524	40.8	101.8	78	40	36				
			bc									Cir str.	Cum.	
Mean.	E.S.	2		1	30.127	73.7	69.3	77	73.6	3				

## MONDAY, 10TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E $\frac{1}{2}$ S.	2	bc	1	30-158	72-8	68-8	79	73	...	Cir.	Cum.	At noon, lat. 19° 41' N. long. 55° 13' W. Current, s. 79° w. 15'.
4.	E $\frac{1}{2}$ S.	2	bc	1	30-115	72-8	68-3	77	73-5	...	Cir.	Cum.	
6.	E $\frac{1}{2}$ S.	3	bc	1	30-149	72-8	68-3	72	74	4	...	Cum.	
8.	E $\frac{1}{2}$ S.	3	bc	1	30-154	73-8	68-3	72	74	4	...	Cum.	Midnight to 1.30 A.M., wind variable from E.S.E. to E. Sea from E.N.E.
10.	E $\frac{1}{2}$ S.	3	bc	1	30-150	74-8	68-8	70	74	3	...	Cum.	
Noon.	E $\frac{1}{2}$ S.	4	bc	1	30-080	74-8	68-8	70	74	3	...	Cum.	
2.	E $\frac{1}{2}$ S.	3	bc	1	30-166	74-8	68-8	70	74	3	Cir.	Cum.	Sp. gr. 1-02739.
4.	E $\frac{1}{2}$ S.	4	bc	1	30-168	74-8	68-3	68	74	2	...	Cum.	
6.	E $\frac{1}{2}$ S.	4	bc	1	30-155	73-8	69-8	79	74	5	...	Cum. str.	
8.	E $\frac{1}{2}$ S.	3	bc	1	30-191	74-3	70-3	79	74	4	...	Cum.	Midt.
10.	E $\frac{1}{2}$ S.	3	bc	1	30-178	74-3	70-3	79	...	4	...	Cum.	
	E $\frac{1}{2}$ S.	2	bc	1	30-178	74-8	71-8	84	74-5	3	...	Cum.	
Totals.	...	35	bc	12	1822	48-6	110-6	64	43	35	Cir.	Cum.	
Mean.	E $\frac{1}{2}$ S.	3		1	30-152	74-0	69-2	75	73-9	3			

## TUESDAY, 11TH.

2.	E $\frac{1}{2}$ S.	3	bc	2	30-153	73-8	67-8	70	74-5	4	Cir.	Cum.	At noon, lat. 19° 18' N. long. 57° 30' W. Current, s. 86° w. 16'.
4.	E $\frac{1}{2}$ S.	4	bc	2	30-158	73-8	68-8	74	74	3	Cir.	Cum.	
6.	E $\frac{1}{2}$ S.	4	bc	2	30-154	73-8	68-8	74	74	3	...	Cum.	
8.	E $\frac{1}{2}$ S.	4	bc	2	30-204	74-8	70-8	79	74-5	3	...	Cum. str.	Sp. gr. 1-02739.
10.	E $\frac{1}{2}$ S.	4	bc	2	30-218	76-8	72-3	77	75	3	...	Cum.	
Noon.	E $\frac{1}{2}$ S.	4	bc	2	30-222	77-8	72-8	75	75	4	...	Cum.	
2.	E $\frac{1}{2}$ S.	4	bc	2	30-172	77-8	72-8	75	75	4	...	Cum.	Cir cum.
4.	E $\frac{1}{2}$ S.	4	bc	2	30-110	77-8	72-8	75	75	4	...	Cum.	
6.	E $\frac{1}{2}$ S.	4	bc	2	30-155	75-8	71-8	79	75	3	...	Cum.	
8.	E $\frac{1}{2}$ S.	4	bc	3	30-190	75-8	70-8	75	75	3	...	Cum.	Midt.
10.	E $\frac{1}{2}$ S.	4	bc	3	30-199	74-8	69-8	74	75	3	...	Cum.	
	E $\frac{1}{2}$ S.	4	bc	3	30-189	74-8	69-8	74	75	3	...	Cum.	
Totals.	...	47	bc	27	2124	67-6	9-1	61	57	40	Cir.	Cum.	
Mean.	E.	4		2	30-177	76-5	70-8	75	74-7	3			

## WEDNESDAY, 12TH.

2.	E $\frac{1}{2}$ S.	5	bc	3	30-165	74-8	70-8	79	74-5	2	...	Cum.	At noon, lat. 18° 56' N. long. 59° 36' W. Current, s. 76° w. 16'.
4.	E $\frac{1}{2}$ S.	5	bc	3	30-088	74-8	70-8	79	74-5	2	...	Cum str.	
6.	E $\frac{1}{2}$ S.	5	bc	3	30-068	74-8	70-8	79	74	5	...	Cum str.	
8.	E $\frac{1}{2}$ S.	4	bcq	3	30-130	74-8	70-8	79	74	6	...	Cum. & Nb	Squalls working up all morning. 7.45 A.M., heavy wind and rain squall — force, 7. Sp. gr. 1-02697.
10.	E $\frac{1}{2}$ S.	5	bcq	3	30-184	77-8	71-8	71	75	7	...	Cum str.	
Noon.	E $\frac{1}{2}$ S.	5	bcq	3	30-128	78-8	73-8	75	75	7	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	Squalls and clouds working over from w.
4.	E $\frac{1}{2}$ S.	5	bcq	3	30-091	74-8	70-8	79	75	8	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	Cum.	
8.	E $\frac{1}{2}$ S.	5	bcq	3	30-088	74-8	70-8	79	75	7	Cir.	Cum str.	Midt.
10.	E $\frac{1}{2}$ S.	4	bcq	2	30-137	74-8	70-8	79	75	7	Cir.	Cum str.	
	E $\frac{1}{2}$ S.	4	bc	2	30-106	74-8	69-8	74	75	7	Cir.	Cum str.	
Totals.	...	47	bcq	28	1155	55-0	11-0	73	52	58	Cir.	Cum. & Cum str.	
Mean.	E.	5		3	30-115	75-5	71-1	77	74-7	6			

## THURSDAY, 13TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sky 0 to 9.	Barometer re- duced to 32° and Sea level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.	3	bc	12	30.056	74.8	70.3	76	75	9	Cir.	Cum.	At noon, lat. 18° 54' N. long. 61° 28' W. Current, N. 42° W. 10'.
4.	E.S.	12	c	1	30.025	74.8	70.8	79	75	10	...	Cum.	
6.	E.S.	4	bc	1	30.043	74.8	71.3	82	75	7	...	Cum.	Sp. gr. 1.02710.
8.	E.S.	4	bc	1	30.075	75.8	71.8	79	75	7	...	Cum str.	
10.	E.S.	4	bc	1	30.109	78.8	75.8	85	76	5	...	Cum str.	4 P.M., wind shifted in a squall.
Noon.	E.S.	4	bc	1	30.125	78.8	75.8	85	76	8	...	Cum str.	
2.	E.S.	5	bcqp	12	30.046	78.8	74.8	80	76	8	...	Cu. & Nb.	4 P.M., wind shifted in a squall.
4.	SE by E.	6	bcqp	12	30.038	74.8	71.8	84	76	8	...	Cu. & Nb.	
6.	S.E.	4	bc	12	30.052	74.8	72.3	87	75.5	8	...	Cum.	4 P.M., wind shifted in a squall.
8.	S.W.	3	bc	12	30.078	74.8	71.8	84	76	7	...	Cum str.	
10.	S.W.	3	bc	12	30.088	74.8	71.8	84	76	7	...	Cum.	4 P.M., wind shifted in a squall.
Midt.	S.W.	3	bc	1	30.085	74.8	71.3	82	75	9	...	Cum str.	
Totals.	...	45	bcqp	18	.820	70.6	29.6	27	66.5	93	Cir.	Cum. & Cum str.	
Mean.	SE by E.	4		1	30.068	75.9	72.5	82	75.5	8			

## FRIDAY, 14TH.

2.	SE by E.	12	bc	1	30.036	73.8	70.8	84	76	9	Cir.	Cum str.	At noon, lat. 18° 40' N. long. 62° 56' W. Current, N. 62° W. 6'.
4.	E by N.	12	bc	1	30.015	74.8	71.8	84	76	9	...	Cum str.	
6.	SE by S.	3	bc	1	30.044	74.8	71.8	84	76	7	Cir str.	Cum.	Sp. gr. 1.02702.
8.	S. S. E.	12	bc	1	30.071	76.8	73.8	84	76	6	Cir str.	Cum.	
10.	S. S. E.	12	bc	1	30.075	76.8	74.8	89	76	5	Cir.	Cum.	Sp. gr. 1.02702.
Noon.	S.	12	bc	1	30.075	76.8	74.8	89	76	5	Cir.	Cum.	
2.	S.	12	bc	1	30.080	77.8	75.8	89	79	4	Cir.	Cum.	Sp. gr. 1.02702.
4.	S. E.	3	bc	1	30.067	77.8	73.8	79	77.5	6	Cir.	Cum.	
6.	E.	2	bc	1	30.038	78.3	73.8	77	77	4	Cir str.	Cum.	Sp. gr. 1.02702.
8.	S. E.	1	bc	1	30.048	75.8	72.3	82	77	4	...	Cum.	
10.	S. E.	2	c	1	30.025	76.8	71.8	75	77	8	Str.	Cir cum.	Sp. gr. 1.02702.
Midt.	E. S. E.	4	c	1	30.022	75.8	70.8	75	77	9	Str.	Cum.	
Totals.	...	27	bc	12	.536	76.1	36.1	31	80.5	77	Cir str.	Cum.	
Mean.	S. E.	2		1	30.045	76.3	73.0	83	76.7	6			

## SATURDAY, 15TH.

2.	E. S. E.	2	c	1	30.002	75.8	70.8	75	77	9	Cir.	Cum.	At noon, lat. 18° 26' N. long. 63° 33' W. 2 A.M., wind shifted to NE by N.
4.	NE by N.	3	c	1	30.008	76.8	71.8	75	76	7	Cir.	Cum.	
6.	N. E.	4	bcqp	1	30.033	74.8	71.8	84	76	6	Cir str.	Cu. & Nb.	Atmosphere very damp.
8.	N. E.	5	bcqp	1	30.053	73.8	71.8	89	76	5	Cir str.	Cu. & Nb.	
10.	...	...	bc	1	...	...	...	...	76	5	...	Cum str.	Atmosphere very damp.
Noon.	...	...	bc	1	30.068	76.8	72.8	79	76	5	Cir str.	Cum.	
2.	N. E.	4	bc	1	30.042	76.8	72.8	79	76	4	...	Cum.	Atmosphere very damp.
4.	N. E.	4	bc	1	30.035	76.8	71.8	75	76	4	...	Cum.	
6.	N. E.	4	bc	1	30.032	76.8	72.8	79	75.5	3	Str.	Cum.	Atmosphere very damp.
8.	E. N. E.	3	bcqp	1	30.080	75.8	71.8	79	76	8	Cir.	Cum str.	
10.	E by S.	4	bcqp	1	30.052	74.8	72.8	89	76	9	...	Cum.	Atmosphere very damp.
Midt.	E.	3	bcqp	1	30.057	74.3	71.8	87	76	10	...	Cum.	
Totals.	...	36	bcqp	12	.462	63.3	22.8	10	72.5	75	Cir str.	Cum. & Nimb.	
Mean.	E. N. E.	4		1	30.042	75.8	72.1	81	76.0	6			

## SUNDAY, 16TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Baromet. re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	5	ocyp	2	30.003	72.3	71.8	97	76	10	...	Cum.	At noon, lat. 18° 17' N. long. 65° W.
4.	N.E.	7	ocpl	3	29.963	71.8	71.3	97	76	10	...	Cum.	
6.	N.E.	9	ocpl	4	29.939	71.8	70.8	94	76	10	...	Cum.	Very heavy rain squalls. 1.30 p.m., anchored at St Thomas island in Gregerie channel.
8.	N.E.	6	ocp	3	30.063	72.8	71.8	94	76	10	...	Nimb.	
10.	N.E.	8	ocp	3	30.101	71.8	69.8	89	76	10	...	Cm.&Nlb.	
Noon.	E.N.E.	7	ocqup	4	30.090	72.8	70.8	89	75.5	10	...	Cm.&Nlb.	
2.	E.N.E.	6	...	...	...	...	...	...	...	10	...	Cum.	
4.	E.N.E.	6	ocyp	...	30.050	73.8	69.8	79	...	10	...	Cum.	Totals.
6.	E.N.E.	3	ocp	...	30.066	71.8	68.8	82	...	10	...	Cum.	
8.	E.N.E.	3	cr	...	30.060	70.8	67.8	83	...	10	...	Cum.	
10.	E.N.E.	3	oc	...	30.174	71.8	68.8	84	...	10	...	Cum.	
Midt.	E.N.E.	1	oc	...	30.070	71.8	69.8	89	...	10	...	Cum.	
Totals.	...	64	ocyp	13	57.9	23.3	0.8	97	35.5	120	...	Cum. & Nimb.	
Mean.	N.E.	5	...	2	30.048	72.1	70.1	89	75.9	10	...	...	

## MONDAY, 17TH.

2.	N.E.	2	bc	...	30.040	72.8	68.8	79	...	8	...	Cum.	At St Thomas island.
4.	N.E.	2	bc	...	30.010	72.8	69.3	81	...	9	...	Cum.	
6.	N.E.	1	c	...	30.025	72.8	68.8	79	...	9	...	Cum.	Evidently a stronger breeze outside from the rapidity of the sea.
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	N.E.	1	or	...	30.068	72.8	69.8	84	...	10	...	Nimb.	
Noon.	N.E.	1	oe	...	30.095	73.3	71.3	87	...	9	...	Cum.	
2.	E.N.E.	2	bc	...	30.055	75.8	71.8	79	...	6	...	Cum str.	
4.	E.N.E.	12	bc	...	30.041	75.8	72.8	84	...	7	...	Cir.	Totals.
6.	E.N.E.	3	bcq	...	30.058	74.8	72.8	89	...	9	...	Cum str.	
8.	E.N.E.	4	bcq	...	30.078	74.8	71.8	84	...	7	...	Cm.&Nlb.	
10.	E.N.E.	4	cyp	...	30.080	71.8	69.8	89	...	9	...	Cir.	
Midt.	E.N.E.	5	bcp	...	30.109	73.8	70.8	84	...	7	...	Cir cum.	
Totals.	...	27	bcq	...	65.0	41.8	7.8	39	...	90	...	Cum. & Nimb.	
Mean.	N.E.	2	...	...	30.059	73.8	70.7	84	...	8	...	...	

## TUESDAY, 18TH.

2.	E.	3	bcq	...	30.078	73.8	70.8	84	...	4	...	Cir.	At St Thomas island.
4.	E.	4	bcq	...	30.046	73.8	70.8	84	...	6	...	Cir.	
6.	E.	4	bcq	...	30.072	70.8	69.3	91	...	9	...	Cm.&Nlb.	Totals.
8.	E.	4	bcq	...	30.082	77.8	73.3	77	...	5	...	Cir.	
10.	E.	3	bcq	...	30.077	79.8	74.3	73	...	5	...	Cir.	
Noon.	...	...	...	...	...	...	...	...	...	...	...	...	
2.	...	...	bcq	...	...	...	...	...	...	...	...	...	
4.	E.N.E.	3	cyp	...	30.058	73.8	71.8	89	...	10	...	Cir cum.	Mean.
6.	E.N.	4	cyp	...	30.035	73.8	70.8	84	...	10	...	Nimb.	
8.	E.N.	3	ocyp	...	30.085	71.8	69.8	89	...	9	...	Nimb.	
10.	E.N.	4	ocq	...	30.098	72.8	70.8	89	...	6	...	...	
Midt.	E.N.	3	ocq	...	30.112	72.8	71.3	92	...	6	...	Cir.	
Totals.	...	35	bcq	...	74.3	41.0	13.0	52	...	70	...	Cir.	Cum. & Nimb.
Mean.	E.N.	3	...	...	30.074	74.1	71.3	85	...	7	...	...	

## WEDNESDAY, 19TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper	Lower.	
2.	E.	4	be	...	30.060	72.8	70.3	87	...	7	...	Cum.	At St Thomas island.
4.	E.	3	be p	...	30.068	72.8	70.3	87	...	8	...	Cum.	
6.	E.	12	be	...	30.090	72.8	70.8	89	...	7	Cir str.	Cum.	
8.	E.	12	be	...	30.098	75.8	72.8	84	...	4	Cir.	Cum.	
10.	E.	12	be	...	30.125	78.8	76.3	82	...	4	...	Cum.	
Noon.	E.	12	be	...	30.108	79.3	74.3	75	...	4	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	E.	12	be	...	30.061	75.8	72.8	84	...	5	Cir str.	Cum.	
8.	E.	12	be	...	30.065	75.8	72.8	84	...	5	...	Cum.	
10.	E.	1	be	...	30.099	74.8	71.3	81	...	3	...	Cum.	
Midt.	E.	12	be	...	30.091	74.8	71.3	81	...	3	...	Cum.	
Totals.	...	22	be	...	885	53.5	23.0	40	...	50	Cir str.	Cum.	
Mean.	E.	2		...	30.088	75.3	72.3	84	...	5			

## THURSDAY, 20TH.

2.	E'S.	12	be	...	30.055	73.8	72.8	94	...	3	Cir.	Cum.	At St Thomas island.
4.	E'S.	12	be	...	30.108	73.8	71.8	89	...	4	Cir.	Cum.	
6.	E'S.	3	be p	...	30.100	72.8	70.8	89	...	7	Cir cum.	Xiub.	
8.	E'S.	3	be p	...	30.105	75.8	72.8	84	...	6	...	Cum.	
10.	E.	4	be q	...	30.142	78.8	72.8	71	...	4	...	Cum str.	
Noon.	E.	12	be q	...	30.140	81.8	73.8	64	...	3	...	Cum.	
2.	E.	4	be	...	30.080	82.3	74.8	66	...	4	...	Cum.	
4.	E.	4	be	...	30.066	82.3	74.8	66	...	3	...	Cum.	
6.	E.	3	be	...	30.070	77.8	72.8	75	...	3	Cir.	Cum.	
8.	E.	3	be	...	30.088	77.3	71.8	73	...	3	...	Cum.	
10.	E.	1	b	...	30.102	75.8	70.8	75	...	0	...	...	
Midt.	E.	3	be	...	30.102	73.8	70.8	84	...	2	...	Cum.	
Totals.	...	34	be q	...	1158	86.1	30.6	930	...	42	Cir.	Cum.	
Mean.	E.	3		...	30.096	77.2	72.5	77	...	4			

## FRIDAY, 21ST.

2.	E.	3	be q	...	30.059	74.3	71.3	84	...	5	Cir str.	Cum.	At St Thomas island.
4.	E.	4	be	...	30.057	73.8	70.8	84	...	3	...	Cum.	
6.	E.	2	be	...	30.075	73.8	70.8	84	...	4	Cir str.	Cum.	
8.	E.	3	be	...	30.101	74.8	71.3	81	...	5	Cir str.	Cum.	
10.	E.	2	be	...	30.105	74.8	71.8	84	...	5	Cir str.	Cum.	
Noon.	...	...	...	...	...	...	...	...	...	...	...	...	
2.	E.	4	be q	...	30.097	79.8	73.8	71	...	5	Cir str.	Cum.	
4.	E'S.	3	be q	...	30.076	78.8	72.8	71	...	3	Str.	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	E.	1	be q	...	30.117	75.8	71.8	79	...	2	...	Cum.	
10.	Calm.	0	be	...	30.185	75.8	72.8	84	...	2	...	Cum.	
Midt.	Calm.	0	be	...	30.122	73.8	69.8	79	...	1	...	Cum.	
Totals.	...	22	be q	...	914	55.5	17.0	1	...	35	Cir str.	Cum.	
Mean.	E.	2		...	30.091	75.5	71.7	80	...	3			

## SATURDAY, 22d MARCH 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	1	bc	...	30.098	73.8	70.8	84	...	3	...	Cum.	At St Thomas island.
4.	N.N.E.	1	bcq	...	30.090	73.8	70.8	84	...	4	Str.	Cum.	
6.	N.E.	2	bcq	...	30.079	72.8	71.3	92	...	4	...	Cum.	
8.	E.	1	bc	...	30.125	75.3	71.3	79	...	6	...	Cum.	
10.	E.	2	bcp	...	30.151	75.8	71.3	77	...	6	Cir.	Cum.	
Noon.	E.	1	bc	...	30.138	77.8	71.8	71	...	5	Cir.	Cum.	
2.	E.S.	3	bc	...	30.140	77.8	72.8	75	...	1	...	Cum.	
4.	E.S.	3	bc	...	30.150	77.3	72.8	77	...	1	...	Cum.	
6.	E.S.	3	bc	...	30.102	76.8	71.8	75	...	1	...	Cum.	
8.	E.S.	2	bc	...	30.125	75.8	70.8	75	...	2	...	Cum.	
10.	Calm.	0	bc	...	30.145	72.8	69.8	84	...	3	...	Cum.	
Midd.	Calm.	0	bcp	...	30.155	72.8	70.8	89	...	3	...	Cum.	
Totals.	...	19	bcp	...	1498	62.6	16.1	2	...	39	Cir str.	Cum.	
Mean.	E.S.	2		...	30.125	75.2	71.3	80	...	3			

## SUNDAY, 23d.

2.	E.	1	bc	...	30.078	71.8	69.8	89	...	2	...	Str.	At St Thomas island.
4.	Calm.	0	bc	...	30.072	72.8	69.8	84	...	2	...	Cum.	
6.	N.E.	1	bc	...	30.094	72.8	68.8	79	...	2	Cir str.	Cum.	
8.	E.	3	bc	...	30.125	76.8	72.8	79	...	3	Cir str.	Cum.	
10.	E.	2	...	...	30.115	77.3	73.3	79	...	...	...	Cum.	
Noon.	E.	3	bcp	...	30.115	76.8	73.3	81	...	...	...	Cum.	
2.	E.	4	bc	...	30.132	76.8	72.8	79	...	3	Cir.	Cum.	
4.	E.	4	bc	...	30.152	77.3	72.8	77	...	3	Cir.	Cum.	
6.	E.	1	bc	...	30.052	77.3	71.8	73	...	4	...	Cum.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	E.	1	bc	...	30.092	74.8	70.8	79	...	3	...	Cum.	
Midd.	E.	1	bc	...	30.133	74.3	70.3	79	...	1	...	Cum.	
Totals.	...	21	bc	...	1160	58.8	16.3	108	...	23	Cir str.	Cum.	
Mean.	E.	2		...	30.105	75.3	71.5	80	...	3			

## MONDAY, 24th.

2.	Variable.	1	bc	...	30.075	75.8	70.8	75	...	4	Cir.	Cum.	At St Thomas island.  4 P.M., left St Thomas island for Bermuda.
4.	Variable.	0	bc	...	30.055	75.8	71.8	79	...	5	Cir.	Cum.	
6.	Variable.	1	bc	...	30.078	74.8	72.8	89	...	6	...	Cum.	
8.	Variable.	0	c	...	30.098	72.8	69.8	84	...	8	...	Cum.	
10.	N.E.	2	bcp	...	30.141	79.8	72.8	67	...	5	Cir str.	Cum.	
Noon.	N.E.	2	bcp	...	30.145	78.8	72.8	71	...	2	Cir str.	Cum.	
2.	N.E.	2	bc	...	30.062	79.3	75.8	73	...	4	...	Cum.	
4.	N.E.	3	bc	...	30.043	77.8	74.3	82	...	4	...	Cum.	
6.	N.E.	3	bc	...	...	...	...	...	...	2	Cir cum.	...	
8.	N.E.	3	bc	...	30.090	75.8	72.8	84	...	2	...	Cum.	
10.	E.N.E.	5	bc	...	30.120	75.8	71.8	79	76	2	...	Cum.	
Midd.	E.N.E.	4	bcp	...	30.100	75.8	71.8	79	76	3	...	Cum.	
Totals.	...	26	bcp	...	1007	72.3	25.3	92	...	47	Cir str.	Cum.	
Mean.	N.E.	2		...	30.092	76.6	72.3	78	76	4			

## TUESDAY, 25TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	EbS.	3	bep	...	30.061	74.8	71.8	84	76	4	...	Cm. & Nb.	At noon, lat. 18° 43' S. long. 65° 5' W.  Sp. gr. 1.02714.
4.	EbS.	4	bc	...	30.053	74.8	71.8	84	76	4	...	Cum.	
6.	EbS.	3	bc	...	30.060	74.8	71.3	82	76	4	...	Cum.	
8.	EbS.	4	bc	...	30.122	76.8	72.8	79	76	4	...	Cum str.	
10.	EbS.	4	bep	...	30.132	76.3	71.8	77	76	4	...	Cum str.	
Noon.	EbS.	4	bc	...	30.147	77.8	72.8	75	77	4	Cir cum.	Cum str.	
2.	EbS.	4	bc	...	30.116	77.8	72.8	75	76	3	...	Cum str.	
4.	E.	5	bc	...	30.110	78.8	74.8	80	76	1	...	Cum.	
6.	E.	4	bc	...	30.117	76.8	75.8	94	76	4	...	Cum.	
8.	E.	5	bc	...	30.140	76.8	75.3	91	76	6	...	Cum.	
10.	E.	4	bc	...	30.142	76.8	72.8	79	75.5	4	...	Str.	
Midt.	EbS.	5	bc	...	30.160	75.8	71.8	79	76	4	Cir.	Str.	
Totals.	...	49	bc	15	1290	78.1	35.6	19	72.4	46	Cir.	Cum. & Str cum.	
Mean.	EbS.	4		2	30.108	76.5	73.0	82	76.0	4			

## WEDNESDAY, 26TH.

2.	EbS.	4	bep	3	30.130	75.8	71.8	79	76	6	...	Cm. & Nb.	At noon, lat. 19° 41' S. long. 65° 7' W.  Current, S. 37° W. 14'.  Sp. gr. 1.02702.
4.	EbS.	5	bc	3	30.120	75.8	71.8	79	76	3	...	Cum str.	
6.	EbS.	5	bc	3	30.179	74.8	71.3	82	76	3	...	Cum str.	
8.	EbS.	5	bc	3	30.205	76.8	69.8	67	75.5	3	...	Cum str.	
10.	EbS.	4	bc	3	30.205	77.8	71.3	69	76	4	...	Cum.	
Noon.	EbS.	4	bc	3	30.217	76.8	71.3	73	76	4	...	Cum.	
2.	EbS.	4	bc	1	30.238	76.8	70.8	71	76	3	Str.	Cum.	
4.	EbS.	4	bc	1	30.251	77.8	70.8	67	76	3	Str.	Cum.	
6.	E.	3	bc	1	30.159	75.8	70.8	75	76	1	...	Cum str.	
8.	E.	2	bc	1	30.182	75.8	71.8	79	76	2	...	Cum.	
10.	E.	3	bc	2	30.175	75.8	71.8	79	76	3	...	Cum.	
Midt.	EbS.	4	bep	2	30.185	75.8	71.3	77	76	4	...	Cum.	
Totals.	...	47	bc	26	2246	75.6	14.6	57	71.5	35	Str.	Cum str.	
Mean.	EbS.	4		2	30.187	76.3	71.2	75	75.9	3			

## THURSDAY, 27TH.

2.	EbS.	4	bc	1	30.175	73.8	69.8	79	76	5	Str.	Cum.	At noon, lat. 21° 21' S. long. 65° 12' W.  Current, S. 55° W. 14'.  Sp. gr. 1.02713.
4.	EbS.	4	bc	1	30.169	75.8	70.8	75	75	3	Str.	Cum.	
6.	E.	3	bc	1	30.216	75.8	71.8	79	75.5	2	...	Cum str.	
8.	E.	3	bc	1	30.236	75.8	70.8	75	76	4	Cir cum.	Cum str.	
10.	E.	3	bc	1	30.237	76.8	71.3	73	76	6	...	Cum str.	
Noon.	EbS.	3	bep	1	30.242	73.8	71.3	87	76	7	...	Cum str.	
2.	E.	2	bc	1	30.172	73.8	71.3	87	76	6	...	Cum.	
4.	E.	2	bc	1	30.172	73.8	70.8	84	76	6	...	Cum.	
6.	E.	2	bc	1	30.185	75.8	70.8	75	76.5	5	Cir.	Cum.	
8.	EbS.	3	bc	1	30.224	75.8	70.8	75	75.5	5	...	Cum str. & Nb.	
10.	EbS.	4	bep	1	30.235	74.8	69.8	74	75	9	...	Cum.	
Midt.	EbS.	3	bc	1	30.228	74.3	71.8	87	75	4	...	Cum.	
Totals.	...	36	bep	12	2182	69.1	11.1	110	68.5	62	Cir str.	Cum. & Cum str.	
Mean.	E.	3		1	30.207	75.0	70.9	79	75.7	5			

## FRIDAY, 28TH MARCH 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, Reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	3	bc	1	30.178	73.8	71.8	89	75	3	...	Cum.	At noon, lat. 22° 49' N. long. 65° 19' W. Current, N. 44° W. 24'.
4.	E.	2	bc	1	30.178	73.8	71.8	89	75	3	...	Cum.	
6.	E.	2	bc	1	30.236	73.8	71.3	87	75	3	...	Cum.	
8.	E.	2	bc	1	30.249	77.8	71.8	71	...	3	...	Cum.	
10.	E.	2	bc	1	30.273	77.8	73.8	79	...	4	...	Cum str.	
Noon.	E <sup>h</sup> N.	3	bc	1	30.255	76.3	71.8	77	75.5	4	...	Cum str.	Sp. gr. 1.02720.
2.	E <sup>h</sup> N.	3	bc	1	30.194	76.8	70.8	71	75.5	4	...	Cir.	
4.	E <sup>h</sup> N.	3	bc	1	30.193	76.3	70.8	73	75.5	3	Cir str.	Cum.	
6.	E <sup>h</sup> N.	2	bc	1	30.175	75.8	70.8	75	75	3	...	Cum.	
8.	E <sup>h</sup> N.	2	bc	1	30.182	75.8	70.8	75	75	3	...	Cm & Cum. S.	
10.	E <sup>h</sup> N.	3	bc	1	30.258	74.8	70.8	79	75	3	...	Cum str.	
Midt.	E.	3	bc	1	30.249	74.8	70.8	79	75	2	...	Cum.	
Totals.	...	30		12	2620	67.6	71.1	104	15	38			
			bc										
Mean.	E.	2		1	30.218	75.6	71.4	79	75.2	3	Cir str.	Cum & Cum str.	

## SATURDAY, 29TH.

2.	E <sup>h</sup> N.	4	bc	1	30.194	73.8	69.8	79	74	5	...	Cm. st. & N.	At noon, lat. 24° 30' N. long. 65° 25' W. Current, N. 47° W. 20'.
4.	E <sup>h</sup> N.	4	bc	1	30.182	73.8	70.3	82	74	3	...	Cum.	
6.	E.N.E.	5	bc	1	30.197	72.8	70.3	87	74	4	...	Cum str.	
8.	E.N.E.	4	bc	1	30.180	72.8	70.8	89	74	4	...	Cum.	Passed small quantities of gulf weed.
10.	E.N.E.	4	bc	1	30.188	73.3	71.3	79	74.5	4	...	Cum.	
Noon.	E.N.E.	3	bc	1	30.220	77.8	71.8	71	74	4	...	Cum.	Squalls of wind and rain from E.N.E. Sp. gr. 1.02719.
2.	S.E.	3	bc	1	30.210	...	...	...	74.5	2	...	Cum str.	
4.	S.E.	4	bc	1	30.152	76.3	71.8	77	74.5	1	...	Cum str.	
6.	S.E.	3	bc	1	30.168	75.8	71.8	79	74	3	...	Cum.	
8.	S.E.	3	bc	1	30.168	75.8	71.8	79	74	3	...	Cum.	
10.	S.E.	3	bc	1	30.178	74.8	71.3	81	74	3	...	Cum.	Midt., light drizzling rain.
Midt.	S.E.	2	bc	1	30.168	73.8	69.8	79	74.5	7	...	Str.	
Totals.	...	42		12	2205	52.8	10.8	2	20	43			
			bc										
Mean.	E <sup>h</sup> S.	3		1	30.184	74.8	71.0	80	74.2	4		Cum & Cum str.	

## SUNDAY, 30TH.

2.	E <sup>h</sup> S.	3	bc	1	30.156	73.3	70.3	84	75	4	...	Cum.	At noon, lat. 26° 26' N. long. 65° 18' W. Current, N. 30° W. 16'.
4.	S.E.	4	bc	2	30.109	72.8	70.3	87	75	3	...	Cum.	
6.	S <sup>h</sup> E.	3	bc	1	30.142	73.3	70.3	84	74	6	...	Cum str.	
8.	S <sup>h</sup> W.	4	bc	1	30.179	74.3	70.8	82	74	10	...	Cum str.	Passed large quantities of gulf weed.
10.	S <sup>h</sup> E.	3	bc	1	30.180	74.3	70.8	82	74	1	...	Cum str.	
Noon.	S <sup>h</sup> E.	3	bc	1	30.178	74.3	71.3	84	74.5	1	...	Cum.	Sp. gr. 1.02737.
2.	S <sup>h</sup> E.	3	bc	1	30.167	74.8	71.8	84	74.5	2	...	Cir cum.	
4.	S <sup>h</sup> E.	3	bc	1	30.151	75.8	72.3	81	74	3	...	Cir cum.	Upper clouds from W. Sea slightly phosphorescent.
6.	S <sup>h</sup> W.	2	bc	1	30.162	73.8	70.8	84	74	5	Cir.	Cm. st. & N.	
8.	S <sup>h</sup> W.	3	bc	1	30.192	74.3	71.8	87	75.5	5	Cir.	Cum.	
10.	W <sup>h</sup> S.	2	bc	1	30.178	73.8	71.8	89	75.5	6	Cir.	Cum.	
Midt.	W <sup>h</sup> S.	3	c	1	30.178	73.8	71.8	89	75.5	9	Cir.	Cum.	
Totals.	...	36		13	1972	48.6	14.1	57	49.5	55			
			bc										
Mean.	S.	3		1	30.164	74.0	71.2	85	74.1	5	Cir.	Cum & Cum str.	

## MONDAY, 31ST MARCH 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 5	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	whs. S.S.	4	ocq	1	30.160	72.8	71.8	94	73	9	...	Cum. & Nb.	At noon, lat. 27° 49' N. long. 64° 59' W. Current, S. 55° E. 14'.
4.	whs. S.S.	3	ocq	1	30.152	71.8	69.8	84	72.5	9	...	Cum. & Nb.	
6.	S.E.	2	bc	1	30.186	71.3	69.8	91	72.5	7	Cir str.	Cum. & Nb.	
8.	S.E.	3	bc	1	30.213	72.8	69.8	84	72	3	Cir str.	...	Wind variable with heavy rain.
10.	S.E.	4	bc	1	30.220	73.8	70.8	84	72	4	Cir str.	Cum str.	
Noon.	S.E.	3	bc	1	30.228	74.3	72.3	89	72	4	Cir str.	Cum str.	
2.	S.E.	3	bc	1	30.178	73.8	71.8	88	72.5	2	...	Cum.	Sp. gr. 1.02746.
4.	S.E.	3	bc	1	30.178	73.8	71.8	89	72	2	...	Cum.	
6.	S.W.	2	bcq	1	30.232	72.8	71.8	94	72	7	...	Cum.	
8.	Calm.	0	bc	1	30.251	71.8	71.8	100	72	3	...	Cum str.	4 to 6 p.m., wind variable. Heavy rain squalls.
10.	Variable.	1	bc	1	30.248	71.3	70.3	94	70	4	...	Cum str.	
Midt.	Calm.	0	bc	1	30.256	71.8	70.3	91	70.5	5	...	Cum str.	
Totals.	...	28		12	2502	32.1	11.1	1083	23.0	59			
Mean.	S.W.	2	bcq	1	30.208	72.7	70.9	90	71.9	5	Cir str.	Cum. & Cum str.	

## TUESDAY, 1ST APRIL.

2.	Calm.	0	bc	1	30.210	71.8	70.3	92	71	3	...	Cum.	At noon, lat. 29° 5' N. long. 65° 1' W. Current, S. 61° E. 4'.
4.	Calm.	0	bc	1	30.216	71.8	69.8	89	70.8	2	...	Cum.	
6.	Variable.	1	bc	0	30.226	71.8	70.3	92	71	2	Cir.	Cum str.	
8.	S.W. by W.	1	bc	0	30.251	72.8	70.8	89	70.5	2	Cir.	Cum str.	Passed large patches of gulf weed. Surface current setting to N.E. Sp. gr. 1.02711.
10.	S.W. by W.	1	bc	0	30.301	72.8	70.8	89	72	3	Cir str.	Cum.	
Noon.	Calm.	0	bc	0	30.299	73.3	74.8	92	72	7	Cir str.	Cum.	
2.	S.E.	1	bc	0	30.249	73.3	72.8	82	72	7	Cir str.	Cum.	Clouds working up from S.S.W.
4.	S.E.	1	bc	0	30.238	73.3	71.8	82	72	5	Cir str.	Cum.	
6.	Calm.	0	bc	0	30.198	74.8	71.8	84	72	5	...	Cum.	
8.	S.E.	1	bc	0	30.205	74.3	70.8	82	71	2	Cir.	Cum.	
10.	S.E.	1	bc	0	30.269	71.8	69.8	89	71	1	Cir str.	Cum.	
Midt.	S.E.	1	bc	0	30.262	71.8	70.3	92	71	2	...	Cum.	
Totals.	...	8			2024	41.6	14.1	94	16.3	41			
Mean.	South.	1	bc	0	30.244	73.5	71.2	88	71.4	3	Cir str.	Cum.	

## WEDNESDAY, 2d.

2.	S.E.	1	bc	0	30.241	71.8	69.8	89	70	3	...	Cum.	At noon, lat. 29° 42' N. long. 65° 7' W. Current, S. 8° W. 22'.
4.	S.E.	1	bc	0	30.236	70.8	69.3	91	69.8	2	...	Cum str.	
6.	S.E.	1	bc	0	30.216	70.8	69.3	91	69.5	2	...	S. & C. cum.	
8.	S.E.	2	bc	0	30.226	71.8	69.3	87	69.5	2	...	Cum.	Sp. gr. 1.02757.
10.	S.E.	1	bc	0	30.294	73.8	71.3	86	69.5	2	...	Cir cum.	
Noon.	S.E.	2	bc	0	30.245	73.3	70.8	87	69.5	2	...	Cir cum.	
2.	S.E.	2	bc	0	30.237	73.8	70.3	82	70.5	3	...	Cir cum.	Heavy dew.
4.	S.E.	2	bc	0	30.230	73.3	69.8	82	70.5	2	...	Str. cum.	
6.	S.E.	1	bc	0	30.267	72.3	69.3	84	70	3	Cir str.	Str. cum.	
8.	E.N.	1	bc	0	30.298	71.8	69.3	84	70	2	...	Str.	
10.	E.S.	1	bc	0	30.251	70.3	69.3	94	70	1	...	Str.	
Midt.	Calm.	0	bew	0	30.246	70.0	68.8	93	68.5	5	...	Str. cum.	
Totals.	...	15			2897	23.8	116.6	90	117.3	20			
Mean.	S.E.	1	bc	0	30.241	72.0	69.7	87	69.8	2	Cir str.	Cir cum. & Str.	

## THURSDAY, 3D APRIL 1873.

Hour.	Wind		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E.	1	bcw	0	30.179	69.3	68.3	94	68.5	4	...	Cum str.	At noon, lat. 31° 49' N. long. 64° 55' W. Current, S. 11' W. 5'. Heavy dew.
4.	S.E.	1	bc	0	30.168	68.8	67.8	94	68.5	2	...	Cum str.	
6.	S.W. ½ W.	2	bc	0	30.168	69.3	67.8	91	69.2	3	Cir str.	Cum str.	
8.	S.W. ½ W.	1	bc	0	30.168	69.8	67.8	88	69.5	4	Cir str.	Cum.	Sp. gr. 1.02731.
10.	S.W. ½ W.	2	bc	0	30.223	69.8	68.8	94	69.5	3	...	Cum.	
Noon.	S.W. ½ S.	2	bc	0	30.113	69.8	69.8	100	68.0	5	...	Cum.	
2.	S.E.	4	bc	0	30.120	71.8	69.8	89	68	4	Cir str.	Cum.	7 p.m., wind suddenly shifted to north, with rain squalls. Lightning to S.E. at intervals.
4.	S.E.	3	oc	0	30.091	71.8	69.8	89	68.5	10	...	Cum.	
6.	S.W. ½ S.	3	bc	0	30.081	70.8	68.8	88	68	8	...	Cum.	
8.	N.W.	4	c	0	30.111	64.8	63.8	94	68	9	...	Cum. & Nb.	
10.	N.W.	4	c	0	30.099	62.8	61.8	94	68	8	...	Cum.	
Midt.	N.W.	2	cr	0	30.099	62.8	61.8	94	67	9	...	Cum.	
Totals.	...	29	bc	...	1619	161.6	76.1	29	100.7	69	Cir str.	Cum. & Cum str.	
Mean.	Variable.	2		0	30.135	68.5	67.2	92	68.4	6			

## FRIDAY, 4th.

2.	N.E. ½ E.	2	ocyp	0	30.105	63.3	62.3	94	66.5	10	Nimb.	At noon, lat. 32° 21' N. long. 64° 36' w.
4.	N.E. ½ E.	3	ocyp	0	30.116	63.8	61.8	88	67	10	Cum. & Nb.	
6.	N.E. ½ E.	2	oc	0	30.126	64.8	60.8	78	67	8	Cum.	
8.	N.E. ½ E.	1	oc	0	30.154	65.3	61.8	81	67.8	10	Cum. & Nb.	Continuous lightning to s. r.
10.	N.E. ½ E.	3	oc	0	30.159	65.3	63.8	91	67.5	10	Cum.	
Noon.	N.E. ½ E.	2	oc	0	30.141	64.8	64.8	100	68	10	Cum str.	
2.	N.E. ½ E.	3	c	0	30.127	64.8	63.8	94	68	8	Cum.	5 p.m., anchored in Grassy Bay, Ber- muda.
4.	N.E. ½ N.	2	bc	0	30.127	64.8	63.8	94	68	4	Cum.	
6.	N.E. ½ N.	2	bc	0	30.200	65.8	62.8	83	...	3	Cum.	
8.	N.E. ½ N.	1	b	0	30.198	66.8	62.8	78	...	0	...	
10.	N.E. ½ N.	1	b	0	30.204	65.8	61.8	78	...	0	...	
Midt.	N.E. ½ N.	1	b	0	30.207	65.8	62.3	81	...	0	...	
Totals.	..	23	ocyp & bc.	...	1864	61.1	32.6	1040	59.8	73	..	Cum. & Nimb.
Mean.	N.E.	2		0	30.155	65.1	62.7	87	67.5	6	..	

## SATURDAY, 5th.

2.	N.E. ½ N.	1	bc	...	30.152	64.8	61.8	83	...	3	...	Cum.	At Bermuda.
4.	N.E. ½ N.	1	bc	...	30.172	64.8	60.8	78	...	2	...	Cum.	
6.	N.W.	1	bc	...	30.228	65.8	61.8	78	...	1	Cir str.	...	
8.	NNW ½ W.	1	bc	...	30.235	67.8	63.8	78	...	2	Cir str.	...	
10.	NNW ½ W.	1	b	...	30.247	69.8	64.8	73	...	0	...	...	
Noon.	NNW ½ W.	1	b	...	30.234	69.8	64.8	73	...	0	...	...	
2.	NNW ½ W.	1	bc	...	30.200	71.3	64.8	67	...	1	Cir str.	...	
4.	NNW ½ W.	1	bc	...	30.189	71.8	65.3	67	...	1	Cir str.	...	
6.	W.S.	1	bc	...	30.187	68.3	62.8	71	...	2	Cir str.	...	
8.	WbS ½ N.	2	bc	...	30.184	67.3	62.8	76	...	3	...	Str. cum.	
10.	WbS ½ N.	1	bcq	...	30.176	66.8	62.8	78	...	5	...	Cir cum.	
Midt.	WbS ½ N.	2	bcq	...	30.171	66.8	62.8	78	...	5	...	Cir cum.	
Totals.	...	14	bc	...	2375	95.1	39.1	60	...	25	Cir str.	Cum.	
Mean.	SWbN.	1		...	30.198	67.9	63.3	75	...	2			

## SUNDAY, 6TH APRIL 1873.

Hour	Wind		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W <sup>1</sup> S <sup>1</sup> N.	4	bcy	...	30.155	66.3	61.8	76	...	5	...	Circum.	At Bermuda.
4.	W <sup>1</sup> S <sup>1</sup> N.	3	bcy	...	30.169	65.8	61.8	78	...	5	Cir.	Cum.	
6.	W <sup>1</sup> S <sup>1</sup> N.	3	bcy	...	30.099	65.8	61.8	78	...	4	...	Cum.	
8.	W <sup>1</sup> S <sup>1</sup> N.	3	eq	...	30.089	64.8	61.8	83	...	7	...	Cum.	
10.	W <sup>1</sup> S <sup>1</sup> N.	4	oe	...	30.125	67.8	66.8	94	...	8	...	Cum.	
Noon.	W <sup>1</sup> S <sup>1</sup> N.	4	oeq	...	30.089	70.8	68.8	88	...	10	...	Cum.	
2.	SW <sup>1</sup> W.	3	bcy	...	30.030	71.0	68.8	87	...	9	...	Cum.	
4.	SW <sup>1</sup> W.	3	bcy	...	30.027	70.8	68.8	88	...	9	...	Cum. & Nb	
6.	S <sup>1</sup> W.	3	oe	...	30.044	67.8	64.8	85	...	10	...	Nimb.	
8.	S <sup>1</sup> W.	2	oe	...	30.036	67.0	64.8	87	...	10	...	Nimb.	
10.	E <sup>1</sup> S <sup>1</sup> N.	3	bc	...	30.094	65.8	63.8	88	...	8	...	Nimb.	
Midd.	E <sup>1</sup> S <sup>1</sup> N.	1	oe	...	30.094	65.8	63.8	88	...	10	...	Nimb.	
Totals.	...	36	bcy	...	...	991	89.5	57.6	58	...	97	Cir	Cum & Nimb.
Mean. Variable.	...	3	...	...	30.083	67.5	64.8	85	...	8	...	...	

## MONDAY 7TH.

2.	E <sup>1</sup> N.	1	oe	...	30.073	65.0	63.8	93	...	10	...	Nimb.	At Bermuda.
4.	S <sup>1</sup> E.	1	oe	...	30.073	65.8	63.3	86	...	19	...	Nimb.	
6.	S <sup>1</sup> W.	1	oe	...	30.081	66.8	64.3	86	...	10	...	Cum str.	
8.	S <sup>1</sup> W.	1	oe	...	30.083	67.8	64.8	83	...	10	...	Cum str.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	W <sup>1</sup> S.	2	e	...	30.069	...	...	...	...	10	...	Cum str.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	SW <sup>1</sup> W.	1	bc	...	30.068	72.8	69.8	84	...	4	...	Cum.	
6.	SW <sup>1</sup> W.	1	e	...	30.046	71.8	68.8	84	...	9	...	Str.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	SW <sup>1</sup> S.	1	e	...	30.050	68.8	65.8	83	...	10	...	Str.	S and coming over from S.W. fast.
Midd.	SW <sup>1</sup> W.	4	e	...	30.049	67.8	64.8	83	...	10	...	Str.	
Totals.	...	13	oe	...	...	571	66.6	45.4	42	...	83	Nimb.	
Mean. Variable.	...	1	oe	...	30.063	68.3	65.7	85	...	9	...	Str. & Cum.	

## TUESDAY, 8TH.

2.	SW <sup>1</sup> W.	5	eq	...	30.045	68.8	65.8	83	...	10	...	Cum.	At Bermuda.
4.	SW <sup>1</sup> W.	4	eq	...	30.031	67.8	65.8	88	...	9	...	Cum str.	
6.	SW <sup>1</sup> W.	3	...	...	30.033	67.8	65.8	88	...	...	...	...	
8.	SW <sup>1</sup> W.	2	e	...	30.043	68.8	66.8	88	...	10	...	...	
10.	SW <sup>1</sup> W.	2	oe	...	30.041	70.8	67.3	81	...	9	...	Cum str.	
Noon.	SW <sup>1</sup> W.	2	oe	...	30.038	71.8	68.3	81	...	8	...	Cum.	
2.	W <sup>1</sup> S.	3	bc	...	30.049	71.8	68.8	84	...	8	...	Cum str.	
4.	W <sup>1</sup> S.	3	bc	...	30.039	71.8	69.8	89	...	6	...	Cum.	
6.	W <sup>1</sup> S.	2	bc	...	30.073	70.3	68.3	88	...	7	...	Cum.	
8.	W <sup>1</sup> S.	2	...	...	...	...	...	...	...	...	...	...	
10.	W <sup>1</sup> S.	5	oe	...	30.091	68.8	66.8	88	...	10	...	Cum.	
Midd.	W <sup>1</sup> S.	5	e	...	30.101	68.3	66.3	88	...	9	...	Cum.	
Totals.	...	38	...	...	...	584	106.8	79.8	66	...	86	Cum. & Cum str.	
Mean. Variable.	...	3	...	...	30.053	69.7	67.3	86	...	9	...	...	

## WEDNESDAY, 9TH APRIL 1873.

Hour.	Wind.		Weather.	State of Sea, or in P.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	whs $\frac{1}{2}$ N.	5	ci	...	30.081	67.8	65.8	88	...	10	...	Cum str.	At Bermuda.  Squid rising fast from w.s.w.
4.	whs $\frac{1}{2}$ N.	4	ci	...	30.071	67.8	65.8	88	...	7	...	Cum str.	
6.	sw $\frac{1}{2}$ W.	2	bc	...	30.116	68.8	66.8	88	...	8	...	Cum. & Nb.	
8.	sw $\frac{1}{2}$ W.	1	bc	...	30.145	71.3	68.3	83	...	5	...	Cir cum.	
10.	sw $\frac{1}{2}$ W.	1	bc	...	30.169	70.8	68.8	88	...	5	...	Cir cum.	
Noon.	sw $\frac{1}{2}$ W.	2	bc	...	30.189	70.8	68.8	88	...	10	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	sw $\frac{1}{2}$ W.	2	bc	...	30.166	69.3	68.3	94	...	4	...	Cum.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	sw $\frac{1}{2}$ W.	2	bc	...	30.197	68.3	66.3	88	...	5	...	Cum.	
Midt.	sw $\frac{1}{2}$ W.	2	bc	...	30.217	67.8	66.0	89	...	6	...	Cum.	
Totals.	...	21	bc	...	1351	82.7	64.9	74	...	66	...	Cir cum., Cum., & Str.	
Mean.	swbw.	2		...	30.150	69.2	67.2	88	...	7	...	...	

## THURSDAY, 10TH.

2.	sw $\frac{1}{2}$ W.	1	bc	...	30.217	67.3	64.8	86	...	4	...	Cum.	At Bermuda.
4.	sw $\frac{1}{2}$ W.	1	bc	...	30.207	66.8	64.8	83	...	4	...	Cum.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	N $\frac{1}{2}$ E.	1	bc	...	30.229	68.8	64.8	78	...	2	...	Cir.	
2.	NE $\frac{1}{2}$ N.	1	bc	...	30.241	...	...	...	...	1	...	Cir.	
4.	NE $\frac{1}{2}$ N.	1	bc	...	30.206	...	...	...	...	8	...	Cum str.	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	Caln.	0	bcm	...	30.219	69.3	66.8	86	...	7	...	Cum str.	
Midt.	Caln.	0	bcm	...	30.215	68.8	66.3	86	...	7	...	Cum str.	
Totals.	...	5	bcm	...	1534	41.0	27.5	419	...	33	...	Cir.	
Mean.	North.	1		...	30.219	68.2	65.5	84	...	5	...	Cum. & Cum str.	

## FRIDAY, 11TH.

2.	Caln.	0	cm	...	30.214	68.8	66.3	86	...	8	...	Cum str.	At Bermuda.
4.	Caln.	0	cm	...	30.206	68.8	65.3	81	...	9	...	Cum str.	
6.	Caln.	0	c	...	30.186	68.8	65.8	83	...	10	...	Cum str.	
8.	Caln.	0	c	...	30.198	70.3	66.8	81	...	9	...	Cir str.	
10.	E $\frac{1}{2}$ N.	1	c	...	30.189	70.8	66.8	78	...	8	...	Cir cum.	
Noon.	E $\frac{1}{2}$ N.	1	c	...	30.186	72.8	68.8	79	...	8	...	Nimb.	
2.	sw $\frac{1}{2}$ S.	1	bc	...	30.158	73.8	67.8	70	...	7	...	Cir cum.	
4.	sw $\frac{1}{2}$ S.	1	bc	...	30.138	72.8	66.8	70	...	6	...	Cir str.	
6.	Caln.	0	bc	...	30.139	71.8	66.8	74	...	1	...	Cir.	
8.	Caln.	0	bcm	...	30.127	70.8	66.8	78	...	3	...	Cir.	
10.	SE $\frac{1}{2}$ E.	1	bc	...	30.114	69.8	66.8	83	...	2	...	Cir.	
Midt.	SE $\frac{1}{2}$ E.	1	bc	...	30.099	70.8	66.8	78	...	1	...	Cir.	
Totals.	Variable.	6	bcm	...	1954	10.1	81.6	101	...	72	...	Cir str.	
Mean.		1		...	30.163	70.8	66.8	78	...	6	...	Cum str.	

## SATURDAY, 12TH APRIL 1873.

Hour	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.			Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	s.e.	2	bc	...	30.067	69.8	66.8	83	...	...	5	...	Cum str.	At Bermuda.
4.	s.e.	3	bc	...	30.027	69.8	66.8	83	...	...	7	...	Cum str.	
6.	s.e.	4	bc	...	30.027	69.8	66.8	83	...	...	6	...	Cum str.	
8.	s.e.	4	bc	...	30.009	70.8	67.8	83	...	...	5	...	Cir.	
10.	sw $\frac{1}{2}$ s.	3	bc	...	30.012	72.3	68.8	82	...	...	5	...	Cir.	
Noon.	sw $\frac{1}{2}$ s.	4	bc	...	30.012	72.8	69.8	84	...	...	6	...	Cir.	
2.	s.e.	4	bc	...	29.979	72.8	69.8	84	...	...	...	...	Cum.	
4.	s.e.	4	...	...	29.932	71.8	68.8	84	...	...	...	...	Cum.	
6.	sw $\frac{1}{2}$ w.	3	bc	...	29.930	72.3	68.8	82	...	...	7	...	Cir str.	
8.	sw $\frac{1}{2}$ w.	3	bc	...	29.932	70.8	67.8	83	...	...	6	...	Cir str.	
10.	sw $\frac{1}{2}$ w.	5	bc	...	29.919	71.3	68.8	86	...	...	8	...	Cir str.	
Midt.	sw $\frac{1}{2}$ w.	7	bc	...	29.905	70.8	68.8	88	...	...	8	...	Cir str.	
Totals.	...	46	bc	...	117.51	15.1	99.6	45	...	...	63	...	Cir str.	
Mean.	sw.	4	...	...	29.979	71.3	68.3	84	...	...	6	...	Cum. & Cum str.	

## SUNDAY, 13TH.

2.	sw $\frac{1}{2}$ w.	5	cq	...	29.862	69.8	68.8	94	...	...	9	...	Cum str.	At Bermuda.
4.	sw $\frac{1}{2}$ w.	6	cq	...	29.835	69.8	67.8	88	...	...	9	...	Cum str.	
6.	sw $\frac{1}{2}$ w.	4	ocq	...	29.835	70.0	68.8	93	...	...	9	...	Cum str.	
8.	sw $\frac{1}{2}$ w.	6	ocq	...	29.836	68.3	64.8	81	...	...	10	...	Cum.&Nb.	
10.	sw $\frac{1}{2}$ s.	5	ocqr	...	29.814	67.8	64.8	83	...	...	10	...	Cum.	
Noon.	sw $\frac{1}{2}$ s.	3	ocqr	...	29.784	67.8	64.8	83	...	...	10	...	Cum.	
2.	sw $\frac{1}{2}$ s.	3	bcqr	...	29.812	64.8	62.3	86	...	...	8	...	Cum str.	
4.	w $\frac{1}{2}$ s.	4	bc	...	29.820	67.3	64.3	83	...	...	9	...	Cum str.	
6.	w $\frac{1}{2}$ s.	4	bc	...	29.829	66.8	63.8	83	...	...	4	...	Cum.	
8.	w $\frac{1}{2}$ s.	4	bc	...	29.818	65.8	62.8	83	...	...	3	...	Cum.	
10.	sw $\frac{1}{2}$ w.	5	bcq	...	29.839	65.8	62.8	83	...	...	9	...	Cum.	
Midt.	sw $\frac{1}{2}$ w.	5	bcq	...	29.894	64.8	62.8	88	...	...	9	...	Cum.	
Totals.	...	54	bcqr	...	997.8	88.8	58.6	68	...	...	99	...	Cum. & Cum str.	
Mean.	w.s.w.	4	...	...	29.831	67.4	64.9	86	...	...	8	...	Cum. & Cum str.	

## MONDAY, 14TH.

2.	w $\frac{1}{2}$ s.	7	bcq	...	29.901	63.8	60.3	80	...	...	4	...	Cum.	At Bermuda.
4.	w $\frac{1}{2}$ s.	4	bcq	...	29.918	63.3	58.8	75	...	...	6	...	Cum.	
6.	w $\frac{1}{2}$ s.	6	bcq	...	29.932	62.8	58.8	77	...	...	5	...	Cir.	
8.	w $\frac{1}{2}$ s.	6	bcq	...	29.947	63.8	59.8	77	...	...	5	...	Cum.	
10.	w $\frac{1}{2}$ s.	5	bcq	...	30.028	64.8	58.8	68	...	...	5	...	Cum str.	
Noon.	w $\frac{1}{2}$ s.	4	bcq	...	30.031	66.5	59.8	65	...	...	4	...	Cum.	
2.	sw $\frac{1}{2}$ w.	4	bcq	...	30.035	65.8	58.8	64	...	...	3	...	Cum.	
4.	sw $\frac{1}{2}$ w.	4	bc	...	30.035	65.8	59.8	68	...	...	3	...	Cum.	
6.	sw $\frac{1}{2}$ w.	3	bc	...	30.107	63.8	57.8	67	...	...	4	...	Cir cum.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	...	
10.	...	...	...	...	...	...	...	...	...	...	...	...	...	
Midt.	w $\frac{1}{2}$ s.	5	bcqr	...	30.058	62.8	58.8	77	...	...	8	...	Cum.&Nb.	
Totals.	...	48	bcqr	...	999.2	43.2	91.5	18	...	...	47	...	Cir.	
Mean.	w.s.w.	5	...	...	29.999	64.3	59.1	72	...	...	5	...	Cum., Cum str., & Nimb.	

TUESDAY, 15TH APRIL 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer reduced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	sw $\frac{1}{2}$ s.	5	ocyp	...	30.078	61.8	58.8	82	...	9	...	Cm.&Nb.		At Bermuda. Heavy showers.
4.	w $\frac{1}{2}$ s.	7	ocyp	...	30.111	60.8	57.8	82	...	10	...	Cm.&Nb.		
6.	w $\frac{1}{2}$ s.	12	bc	...	30.110	60.8	57.8	82	...	3	...	Cm.&Nb.		
8.	w $\frac{1}{2}$ s.	3	bcq	...	30.055	63.8	57.8	67	...	3	...	Cm.&Nb.		
10.	w $\frac{1}{2}$ s.	3	bcq	...	30.055	63.8	59.8	77	...	...	...	...		
Noon.	w $\frac{1}{2}$ s.	3	bcq	...	30.074	67.8	61.8	68	...	...	...	...		
2.	w $\frac{1}{2}$ s.	4	bcq	...	30.093	69.8	63.8	69	...	4	...	Cir cum.		
4.	w $\frac{1}{2}$ s.	6	bcq	...	30.095	68.8	63.8	73	...	2	...	Cum.		
6.	...	...	...	...	...	...	...	...	...	...	...	...		
8.	...	...	bcq	...	...	...	...	...	...	...	...	...		
10.	w $\frac{1}{2}$ s.	6	bcq	...	29.996	67.8	63.8	78	...	...	...	...		
Midt.	w $\frac{1}{2}$ s.	6	bcq	...	29.977	67.3	63.8	81	...	...	...	Cum.		
Totals.	...	45	bcq	...	644	52.5	49	59	...	31	...	Cum. & Nimb.		
Mean.	wbs.	5			30.064	65.2	60.9	76	...	5	...			

WEDNESDAY, 16TH.

2.	sw $\frac{1}{2}$ s.	5	bcq	...	29.837	65.8	63.8	88	...	5	...	Cum.		At Bermuda. 4.10 A.M., heavy rain squall.
4.	sw $\frac{1}{2}$ s.	7	bcq	...	29.802	65.8	63.8	88	...	6	...	...		
6.	sw $\frac{1}{2}$ s.	6	bcq	...	30.007	64.8	62.3	86	...	6	...	...		
8.	sw $\frac{1}{2}$ s.	4	bcq	...	30.027	64.8	61.3	81	...	...	...	...		
10.	sw $\frac{1}{2}$ s.	4	bcq	...	30.038	64.8	61.3	81	...	...	...	...		
Noon.	w $\frac{1}{2}$ s.	5	bcq	...	30.038	65.8	61.8	78	...	...	...	Cum.		
2.	w $\frac{1}{2}$ s.	5	bc	...	30.031	63.8	58.8	72	...	10	...	Cum.		
4.	w $\frac{1}{2}$ s.	4	bc	...	30.029	63.8	58.8	72	...	5	...	Cum.		
6.	w $\frac{1}{2}$ s.	3	bc	...	30.009	63.8	58.8	72	...	...	...	Cum.		
8.	w $\frac{1}{2}$ s.	3	...	...	...	...	...	...	...	...	...	...		
10.	w $\frac{1}{2}$ s.	1	bc	...	30.040	63.8	58.3	70	...	6	...	Cum.		
Midt.	w $\frac{1}{2}$ s.	1	bc	...	30.040	63.8	58.3	70	...	5	...	Cum.		
Totals.	...	48	bcq	...	16895	50.8	73	88	...	43	...	Cum.		
Mean.	wbs.	4			29.991	64.6	60.7	78	...	6	...			

THURSDAY, 17TH.

2.	sw $\frac{1}{2}$ w.	1	bc	...	30.052	62.8	58.3	74	...	7	...	Cum.		At Bermuda.
4.	sw $\frac{1}{2}$ w.	1	bc	...	30.059	62.3	57.8	75	...	6	...	Cum.		
6.	sw $\frac{1}{2}$ w.	1	bc	...	30.060	62.3	57.8	75	...	6	...	Cum.		
8.	Variable.	1	bc	...	30.060	62.3	57.8	75	...	7	...	Cum.		
10.	Variable.	1	bc	...	30.059	68.8	59.8	56	...	7	...	Cum.		
Noon.	E.N.E.	1	bc	...	30.045	68.8	59.8	56	...	7	...	Cum.		
2.	S.E.E.	1	c	...	30.039	65.8	58.3	62	...	10	...	Cum.		
4.	S.E.E.	1	c	...	29.994	64.8	57.8	63	...	10	...	Cum.		
6.	...	...	...	...	...	...	...	...	...	...	...	...		
8.	S.E.E.	2	...	...	29.990	62.8	57.8	72	...	...	...	Cum.		
10.	S.E.E.	3	cp	...	29.984	65.8	62.8	83	...	10	...	Cum.		
Midt.	S.E.E.	3	c	...	29.963	66.3	63.8	86	...	10	...	Cum.		
Totals.	...	16	bc	...	314	52.8	101.8	777	...	80	...	Cum.		
Mean.	E.N.E.	1			30.028	64.8	59.3	71	...	8	...			

## FRIDAY, 18TH APRIL 1873.

Hour	Wind.		Weather.	State of Sea. 6 to 9.	Barometere direct to 32 and Sea Level.	Thermometer.			Temperature of Sea Surface	Clouds, 6 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	s.e.	3			29.826	66.8	64.8	83				Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 71, min. 65.
4.	s.e.	4			29.886	67.8	61.8	83				Cum.	
6.	s.e.	1	cp		29.826	67.8	64.8	83		9		Cum.	
8.	s.w. by w.	1	cp		29.806	67.8	64.8	83		9		Cum.	
10.	s.w. by w.	1	cp		29.821	69.8	60.8	100		10		Nimb.	
Noon.										10			
2.	s.w. by w.	2	cr		29.789	66.8	66.3	97		10		Nimb.	
4.	s.w. by w.	2	cr		29.699	67.8	63.3	76		10		Nimb.	
6.	s.w. by s.	3	cr		29.749	67.8	66.8	94		10		Nimb.	
8.													
10.	s.w. by s.	4	ocp		29.765	66.8	65.8	94		9		Nimb.	
Milt.	s.w.	5	ocp		29.706	65.8	64.8	94		9		Nimb.	
Totals.		26			797.3	75.0	56.0	89.2		86		Cum. & Nimb.	
Mean.	s.w.	3			29.797	67.5	65.6	89		9			

## SATURDAY, 19TH.

2.	s.w.	4	c		29.719	65.8	64.8	91		10		Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 72, min. 65.
4.	s.w.	3	be		29.729	65.8	63.8	88		5		Cum.	
6.	s.w. by w.	4	be		29.726	67.3	65.3	88		6		Cum str.	
8.	w. by s.	3	be		29.764	67.8	63.3	76		3		Circum.	
10.	w. by s.	3	be		29.797	67.8	63.8	78		2		Cum.	
Noon.	w. by s.	3	be		29.797	67.8	63.8	78		2		Cum.	
2.												Circum.	
4.	w. by s.	5	be		29.792	68.8	61.8	64		6		Nimb.	
6.	w. by s.	4	be		29.746	67.3	61.8	71		5		Cum.	
8.	w. by s.	5	be		29.850	64.8	59.8	73		8		Nb. & Cum.	
10.	s.w. by w.	6	be		29.854	64.8	58.8	68		6		Cum. & Nb.	
Milt.	s.w. by s.	5	be		29.802	64.8	56.8	59		7		Cum.	
Totals.		45			867.6	72.8	23.8	83.7		60		Cum. & Nimb.	
Mean.	s.w.	4			29.789	66.6	62.2	76		5			

## SUNDAY, 20TH.

2.	w. by s.	6	be		29.852	63.8	55.8	59		6		Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 70.5, min. 62.5.
4.	w. by s.	7	be		29.879	63.8	56.8	63		4		Cum.	
6.	w. by s.	5	be		29.967	64.3	57.3	63		3		Cum.	
8.	s.w. by w.	4	be		30.012	64.8	56.8	59		7		Cum.	
10.	w. by s.	4	be		30.045	66.8	57.8	56		3		Cum.	
Noon.	s.w. by w.	3	be		30.049	67.8	56.8	49		1		Cum str.	
2.	w. by s.	4	be		30.039	67.8	57.8	52		3		Cum str.	
4.	w. by s.	3	be		30.034	67.8	57.8	52		2		Cum str.	
6.	w. by s.	2	be		30.080	66.3	55.3	48		2		Cum str.	
8.	w. by s.	2	be		30.105	65.8	54.8	48		2		Cum str.	
10.	w. by s.	1	b		30.121	65.3	56.8	57		0			
Milt.	w. by s.	1	b		30.192	64.8	56.3	57		0			
Totals.		42			285	69.1	80.1	66.3		33		Cum. & Cum str.	
Mean.	wnw.	3			30.024	65.8	56.7	55		3			

## MONDAY, 21st APRIL 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wbs N.	3	bc	...	30.105	64.8	58.8	68	...	5	...	Cum.	At noon, lat. 32° 26' N. long. 64° 36' W. Temperature by self-registering thermo- meter, max. 71° 5, min. 62° 5. Left Bermuda at 7 A.M. Passed the Narrows at 10 A.M.
4.	wbs N.	3	bc	...	30.128	64.8	57.8	63	...	4	...	Cum.	
6.	w N.	2	bc	...	30.082	64.3	58.3	67	...	1	Cir.	Cum.	
8.	s E.	3	bc	...	30.092	67.8	61.3	66	...	12	Cir.	...	
10.	s E.	4	bc	...	30.082	68.8	61.8	64	...	5	Cir.	Cum.	
Noon.	s W.	3	bc	...	30.073	68.8	62.3	66	67.2	4	Cum str.	Cum.	
2.	s W.	4	bc	...	30.066	68.3	62.3	68	67.2	2	...	Cum str.	
4.	s W.	3	bc	...	30.062	68.8	63.8	73	67.2	3	Cir.	Str. cum.	
6.	s W W W	4	bc	...	29.994	68.8	63.5	72	67.7	3	...	Cum.	
8.	s W.	3	bcnl	...	30.026	67.8	64.8	83	66.5	4	...	Cum.	
10.	s W.	4	bcnl	...	30.045	67.8	63.3	76	67.5	4	...	Cum str.	
Midt.	s W.	4	bcnl	...	30.025	67.3	64.3	83	67.5	4	...	Cum str.	
Totals.	...	40	bcnl	...	660	88.1	62.3	849	50.8	41	Cir.	Cum. & Str.	
Mean.	s. w.	3	...	...	30.055	67.3	61.9	71	67.2	3	...	...	

## TUESDAY, 22d

2.	s W W W	2	bcnw	...	29.973	67.3	64.3	83	67	4	...	Str. cum.	At noon, lat. 32° 26' N. long. 65° 9' W. Temperature by self-registering thermo- meter, max. 71° 5, min. 66° 5. Sp. gr. 1.02714.
4.	wbs s.	3	bcn	...	29.987	65.3	64.8	97	67	8	...	Str. cum.	
6.	s W.	2	bcn	...	30.013	67.8	65.3	86	66	5	...	Str. cum.	
8.	wbs s.	2	bcn	...	30.030	66.8	64.8	88	67.8	5	...	Cum.	
10.	s W W W	1	bcn	...	30.092	68.8	65.3	81	68.0	6	Cir.	Cum str.	
Noon.	s W W W	2	bcn	...	30.107	69.5	66.8	84	68.5	7	...	Cum.	
2.	s W W W	1	ocn	...	30.065	70.3	66.3	78	68.5	10	...	Cum.	
4.	s W.	2	ocn	...	30.035	68.3	65.8	86	68	10	...	Cum.	
6.	s W.	3	ocn	...	30.029	67.8	63.3	76	67.5	10	...	Cum str.	
8.	s W.	2	ocn	...	30.027	67.8	62.8	73	67.5	9	...	Cum str.	
10.	s W.	3	ocn	...	29.991	67.8	62.8	73	68	9	...	Cum.	
Midt.	s W.	2	ocn	...	29.993	67.8	64.8	83	67.5	9	...	Cum.	
Totals.	...	25	bcn	...	342	95.3	57.1	988	91.3	92	Cir.	Cum. & Str.	
Mean.	s W W.	2	...	...	30.028	67.9	64.8	82	67.6	8	...	...	

## WEDNESDAY, 23d.

2.	s Wbs.	1	ocn	...	29.979	67.3	65.8	91	...	10	...	Cum.	At noon, lat. 32° 7' N. long. 65° 4' W. Temperature by self-registering thermo- meter, max. 73°, min. 67°.
4.	s Wbs.	2	oc	...	29.931	67.0	64.8	87	...	10	...	Cum.	
6.	s Wbs.	3	oc	...	29.898	67.3	65.8	91	...	10	...	Cum str.	
8.	s W.	2	oc	...	29.914	68.8	64.3	76	...	10	...	Cum str.	
10.	s W.	4	oc	...	29.846	68.8	63.8	73	...	10	...	Cum.	
Noon.	s W.	5	oc	...	29.826	68.8	63.8	73	...	6	...	Cum.	
2.	s W.	4	bcq	...	29.837	72.3	68.3	79	...	7	...	Cir cum str	
4.	s W.	5	bcq	...	29.785	69.5	67.5	88	...	10	...	Nimls.	
6.	s W.	4	bcq	...	29.728	69.8	67.8	88	67.2	9	...	Cum str.	
8.	s W W.	4	bc	...	29.733	69.3	67.8	91	67.0	2	...	Cum str.	
10.	s W W.	4	bc	...	29.711	68.8	66.8	88	67.5	3	...	Cum.	
Midt.	s W W.	3	bc	...	29.694	67.8	66.8	94	67.0	2	...	Cum.	
Totals.	...	41	bcq	...	9882	105.5	73.3	1019	28.7	89	...	Cum. & Cum str.	3 P.M., weighed and proceeded towards New York.
Mean.	s. s. w.	3	...	...	29.823	68.8	66.1	85	67.2	7	...	...	

THURSDAY, 21<sup>st</sup> APRIL 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 100.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w's.	3	bell	...	29.740	68.0	66.8	93	67	4	...	Cir cum.	At noon, lat. 32° 19' N. long. 65° 39' W. Temperature by self-registering thermo- meter, max. 72°, min. 66° 5. Current, S. 13° E. 9'.
4.	swsw.w.	4	bcq	...	29.746	66.8	64.8	88	67	3	...	Str.	
6.	swsw.w.	3	bc	...	29.756	67.8	64.8	83	67.5	3	Cir.	Cum.&Str.	
8.	swsw.w.	12	b	...	29.838	68.3	65.3	83	67.5	0	...	...	
10.	sw.w.	12	bc	...	29.846	68.3	65.8	86	68	12	...	Cum.&Str.	
Noon.	sw.w.	12	b	...	29.872	70.0	66.8	82	68	0	...	...	
2.	w's.w.	12	b	...	29.864	69.8	67.8	88	67.5	0	...	...	
4.	w's.w.	12	bc	...	29.854	69.8	67.8	88	67.5	3	...	Cum.	
6.	w's.	3	bc	...	29.874	69.5	67.3	87	68	7	...	Cum str.	
8.	w's.	12	bc	...	29.913	68.8	66.8	88	68.2	6	...	Cum.	
10.	swsw.w.	3	bc	...	29.912	69.0	66.3	84	68.2	4	...	Cum str.	
Midd.	swsw.w.	3	b	...	29.894	69.8	67.3	86	68.0	0	...	...	
Totals.	...	31	bc	...	10169	105.9	77.6	76	92.4	32	Cir.	Cum. & Str.	
Mean.	swsw.	3		...	29.847	68.8	66.5	86	67.7	3			

FRIDAY, 25<sup>th</sup>.

2.	w's.w.	3	b	3	29.764	68.8	63.8	73	68	0	...	...	At noon, lat. 33° 4' N. long. 66° 39' W. Temperature by self-registering thermo- meter, max. 75°, min. 67° 5. Current, S. 35° E. 9'. Sea slightly phosphorescent. Lightning at intervals from N. Sp. gr. 1.02729. Light cumulus film very low, flying to the N.E. Weather damp.
4.	swsw.w.	4	bell	3	29.734	67.8	63.8	78	68	7	...	Cum.	
6.	swsw.w.	5	bell	3	29.856	68.8	66.8	88	69.7	7	...	Cum.	
8.	w's.w.	5	bell	3	29.894	70.5	68.8	89	70.2	4	...	Cum.	
10.	w's.w.	5	bc	...	29.876	72.8	69.3	82	70	5	...	Cum.	
Noon.	w's.w.	4	bc	...	29.871	73.3	69.3	79	70	5	...	Cum.	
2.	swsw.w.	4	bc	...	29.829	73.8	68.8	74	70	6	...	Cum.	
4.	sw.w.	5	bc	...	29.803	71.8	68.8	84	70.2	8	...	Cum.	
6.	sw.w.	6	bcq	...	29.754	70.8	67.8	83	70.2	3	...	Cum.	
8.	sw.w.	5	bell	...	29.689	69.8	67.8	88	69	6	Cir str.	Cum.	
10.	sw.w.	7	bell	...	29.621	68.8	67.3	91	67.5	6	Cir str.	Cum str.	
Midd.	sw.w.	6	bell	...	29.601	68.8	66.3	86	67.5	8	Cir str.	Cum str.	
Totals.	...	59	bell	12	9394	58	88.6	99.5	110.3	60	Cir str.	Cum.	
Mean.	swsw.	5		3	29.775	70.5	67.4	83	69.2	5			

SATURDAY, 26<sup>th</sup>.

2.	w's.	6	bell	...	29.630	65.8	61.8	78	66	8	...	Cum str.	At noon, lat. 34° 11' N. long. 67° 37' W. Temperature by self-registering thermo- meter, max. 69°, min. 58°. Current, S. 35° E. 16'. 0.30 A.M., very heavy rain squall with vivid lightning. 2.30, lightning ceased. Sea slightly phosphorescent. Sp. gr. 1.02707. Squally in early part of first watch.
4.	w's.w.	7	cyp	...	29.644	63.8	58.8	72	65	10	...	Cum.	
6.	w's.w.	7	cyp	...	29.681	60.8	55.8	72	66	10	...	Cum.	
8.	w's.w.	6	bell	...	29.707	60.8	55.8	72	66	8	...	Cum.	
10.	swsw.w.	8	bell	5	29.803	59.3	52.8	64	66	8	Cir str.	Cum.&Nb.	
Noon.	swsw.w.	8	bell	5	29.830	60.8	53.8	62	65.5	8	Cir str.	Cum.	
2.	swsw.w.	7	bell	...	29.853	60.8	54.3	65	65.5	7	...	Cum.	
4.	swsw.w.	6	bell	...	29.873	61.3	53.8	60	66	7	...	Cum.	
6.	swsw.w.	7	bell	...	29.939	57.8	52.8	71	64.5	6	...	Cum.	
8.	swsw.w.	6	cyp	...	29.941	57.8	52.8	71	65	6	...	Cum.	
10.	swsw.w.	7	bell	5	29.968	57.5	51.8	67	65	5	...	Nimb.	
Midd.	swsw.w.	7	bell	5	29.968	58.3	51.8	64	65	6	...	Nimb.	
Totals.	...	82	bell	20	9818	4.8	56.1	98	65.5	89	Cir str.	Cum. & Nimb.	
Mean.	swsw.	7		5	29.818	60.4	54.7	68	65.5	7			

SUNDAY, 27TH APRIL 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wby.	6	bcqp	...	29.985	58.8	52.5	65	65.5	9	...	Cstr.&Nb.	At noon, lat. 34° 3' N. long. 67° 32' W. Current, S. 19° E. 5'. Temperature by self-registering thermo- meter, max. 63°, min. 56° 5'. Long swell from northward. Sp. gr. 1.02704.
4.	wby.	7	bcq	...	29.989	57.8	52.8	71	65.0	9	...	Cum str.	
6.	w.N.W.	6	bcq	...	30.038	58.3	51.5	62	65	5	...	Cum str.	
8.	w.N.W.	5	bc	...	30.109	59.3	50.8	55	65	4	...	Cum.	
10.	w.N.W.	5	bc	...	30.113	58.8	50.8	57	65	6	...	Cum.	
Noon.	w.N.W.	5	oqp	...	30.118	58.8	50.8	57	65	9	...	Cum.	
2.	w.	5	bcq	4	30.173	60.8	53.8	62	65.7	8	Cir str.	Cm.&Nb.	
4.	N.W.	4	bcqtl	4	30.146	60.8	55.3	70	65.5	9	Cir str.	Cm.&Nb.	
6.	N.W.	3	bc	4	30.138	61.8	54.5	61	66	7	Cir str.	Cum.	
8.	N.W.	4	bc	4	30.155	60.0	53.8	65	66	6	Cir str.	Cm.&Nb.	
10.	wby.	4	bcq	4	30.148	59.8	53.8	66	64.5	5	Cir.	Cum.	Lightning to north eastward.
Midd.	w.N.W.	5	eq	4	30.136	59.8	53.8	66	64.5	8	Cir.	Cum.	
Totals.	...	59	bcqptl	24	1248	114.8	34.2	757	62.7	81	Cir str.	Cum. & Nimb.	
Mean.	w.N.W.	5		4	30.104	59.6	52.8	63	65.2	7			

MONDAY, 28TH.

2.	w.N.W.	5	bcqptl	4	30.166	60.8	52.3	52	66	7	...	Cm.&Nb.	At noon, lat. 34° 51' N. long. 68° 30' W. Temperature by self-registering thermo- meter, max. 68°, min. 59°. Current, S. 63° W. 6'. Lightning all round. Weather cleared at 2 A.M.
4.	wby.	5	bcq	4	30.166	60.8	53.8	58	67	6	Cir.	...	
6.	wby.	5	bcq	4	30.180	64.8	53.8	48	67.5	7	...	Cm.&Nb.	
8.	wby.	4	bc	4	30.176	63.8	55.3	57	68.5	7	Cir str.	Cum.	
10.	swby.	3	bc	3	30.207	66.8	57.5	55	69	4	...	Cum str.	
Noon.	N.W.	2	bc	3	30.225	65.8	55.8	52	69.5	4	Cir.	Cum str.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	swby.	1	bc	2	30.132	63.8	54.3	53	69.5	9	Cir cum.	Cum str.	
8.	swby.	1	oqp	2	30.140	62.8	54.5	58	69	10	...	Cum str.	
10.	w.s.w.	1	oe	2	30.123	62.5	55.8	64	67	10	...	Cum str.	Sp. gr. 1.02702.
Midd.	S.S.E.	2	oe	2	30.052	61.8	56.8	72	67	10	...	Cum str.	
Totals.	...	29	bcq	30	1567	33.7	49.9	569	80	74	Cir.	Cum str.	
Mean.	wby.	3		3	30.157	63.1	55.0	57	68.0	7			

TUESDAY, 29TH.

2.	NEbyS.	5	oqp	2	29.907	62.8	60.8	88	65	8	...	Cum.	At noon, lat. 36° 5' N. long. 69° 54' W. Current, S. 40° W. 12'. Temperature by self-registering thermo- meter, max. 70° 5', min. 57° 7'. 6.50 A.M., wind shifted suddenly to S.W. Short heavy sea from S.W. 11.35 A.M., wind shifted to swby. Sp. gr. 1.02708.
4.	SEbyE.	5	oqp	4	29.806	62.8	59.8	82	65	8	...	Cum.	
6.	SEbyE.	6	oqp	3	29.725	60.3	59.8	97	64	10	...	Nimb.	
8.	S.S.W.	6	bc	4	29.582	66.8	65.3	91	66	9	...	Cm.&Nb.	
10.	S.S.W.	6	bc	5	29.566	66.8	64.8	88	66	6	Cir str.	Cum.	
Noon.	swby.	4	bc	4	29.591	67.3	64.3	83	66.5	3	Cir str.	Cum.	
2.	N.W.	5	bc	4	29.724	65.3	61.8	81	66	4	...	Cum.	
4.	N.W.	4	bc	4	29.781	65.3	61.0	77	65	5	...	Cum str.	
6.	NbyE.	3	e	3	29.828	63.8	60.8	82	65	7	...	Cum.	
8.	N.	2	bc	2	29.893	62.8	60.8	88	65	2	...	Nimb.	Weather hazy.
10.	NEbyS.	1	bc	...	29.904	63.3	59.8	80	65	4	Cir str.	Cum str.	
Midd.	NEbyE.	2	bc	...	29.912	63.3	60.3	82	65	7	...	Cum.	
Totals.	...	49	bcnqr	35	9209	50.6	19.3	59	63.5	73	Cir str.	Cum & Nimb.	
Mean.	Variable.	4		3	29.767	64.2	61.6	85	65.3	6			

## WEDNESDAY, 30th APRIL 1873.

Hour	Wind.		Weather	State of Sea. 0 to 9	Barometer re- duced to 32° and Sea-Level	Thermometer		Humidity, Sat. = 100	Temperature of Sea Surface	Clouds, 0 to 10		Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Wet Bulb.			Upper.	Lower.			
2.	S.	12	bcm	...	29.854	61.8	60.8	82	65	8	...	Cum.	At noon, lat. 35° 58' S. long. 70° 39' W. Current, s. 65° W. 17'. Temperature by self-registering thermo- meter, max. 64° 2, min. 60.0. 3.50 A.M., wind shifted to the N.E.S. suddenly with heavy rain. Sp. gr. 1.02697.	
4.	N.E.S.	1	ocr	...	29.842	61.8	60.8	94	65	10	...	Cum.&N.b.		
6.	N.E.S.	12	cp	...	29.834	61.8	59.8	88	65	6	...	Cum.		
8.	S.	3	ocsp	...	29.904	60.8	59.3	91	65	...	...	Cum.		
10.	S.N.W.	15	cp	4	29.981	60.8	56.8	77	65	10	...	Cum.		
Noon.	N.W.S.	7	bcp	4	29.984	61.5	56.8	73	65	8	...	Cum.		
2.	N.W.S.	6	bc	...	30.031	62.3	56.8	70	71.5	5	...	Cum.		
4.	N.W.S.	5	bc	...	30.068	61.8	56.8	72	71.2	5	...	Cum.		
6.	S.N.W.	6	bc	...	30.089	61.8	56.8	72	72.5	5	...	Cum.		
8.	N.W.	4	c	...	30.143	61.8	56.8	72	73	7	...	Cum.		
10.	S.	3	bc	3	30.210	61.5	54.8	64	72	2	...	Cum.		
Midt.	S.	12	bc	3	30.234	61.8	56.8	72	71	4	...	Cum.		
Totals.	...	46	bcp	14	174	21.5	93.1	927	101.2	70	...	Cum.		
Mean. Variable.	4			3	30.014	61.8	57.8	77	68.4	6				

## THURSDAY, 1st MAY.

2.	S.N.E.	3	bc	...	30.191	62.3	56.8	70	72	7	...	Cum.&N.b.	At noon, lat. 36° 23' S. long. 71° 51' W. Current, s. 78° E. 14'. Temperature by self-registering thermometer, max. 68° 0, min. 61° 5. Sp. gr. 1.02675.
4.	S.E.	2	bc	...	30.215	61.8	56.3	70	72.5	6	...	Cum.	
6.	N.E.S.	4	bc	...	30.232	61.8	57.0	73	75	6	...	Cum.	
8.	N.E.S.	4	bc	...	30.232	63.0	57.0	67	75	8	...	Cir. cum.	
10.	E.S.	3	bc	...	30.240	59.0	54.8	76	75	2	...	Cum.	
Noon.	E.S.	3	bc	...	30.242	60.0	54.8	71	75	2	...	Cum.	
2.	E.S.	3	bc	...	30.270	65.5	56.8	56	74.8	6	...	Cum str.	
4.	E.S.	4	bc	...	30.264	65.5	58.3	63	75	10	...	Cum.	
6.	S.E.	4	bc	...	30.237	62.3	55.8	65	75	9	...	Cum str.	
8.	S.E.S.	3	bc	...	30.194	62.8	56.3	65	73.5	10	...	Cum str.	
10.	S.S.W.	3	c	...	30.199	63.8	57.8	67	67	9	...	Cum.	
Midt.	S.W.S.	5	cp	...	30.154	61.8	57.8	77	59.5	8	...	Cum.	
Totals.	...	41	bcp	...	...	2700	29.6	79.5	820	26.3	83	...	Cum. & Cum str.
Mean.	E.S.	3		...	30.225	62.5	56.6	68	72.2	7	...	...	

## FRIDAY, 2d.

2.	S.W.	2	cd	3	30.112	58.0	55.8	86	54.5	10	...	Nimb.	At noon, lat. 37° 25' S. long. 71° 40' W. Temperature by self-registering thermometer, max. 61° 2, min. 57° 7. Sp. gr. 1.02538.
4.	S.W.	3	cpd	3	30.066	58.3	55.5	82	55	10	...	Nimb.	
6.	S.E.S.	2	ocr	2	30.028	58.8	56.5	87	56	10	...	Nimb.	
8.	S.E.S.	3	ocr	2	30.025	58.8	57.8	94	56.2	10	...	Nimb.	
10.	S.E.E.	2	ocsp	2	29.951	59.3	58.0	92	56.5	10	...	Nimb.	
Noon.	S.W.W.	3	ocsp	2	29.839	59.3	57.8	91	56.5	10	...	Nimb.	
2.	S.W.S.	3	ocsp	2	29.823	59.8	58.8	94	56	10	...	Nimb.	
4.	S.W.S.	3	ocsp	2	29.777	59.8	58.8	94	56	10	...	Nimb.	
6.	S.W.W.	4	cd	3	29.764	58.8	58.8	100	55	10	...	Nimb.	
8.	S.W.W.	4	cd	3	29.687	56.8	58.8	100	55.5	10	...	Nimb.	
10.	S.W.S.	4	crf	2	29.648	57.3	56.8	97	51.5	10	...	Nimb.	Vivid flashes of lightning from the S.W.
Midt.	S.W.W.	7	crift	3	29.577	58.3	57.3	93	56.0	10	...	Nimb.	
Totals.	...	41	ocsp	29	19297	163.3	88.7	30	64.7	120	...	Nimb.	
Mean.	S.W.	3		2	29.858	58.6	57.4	92	55.4	10	...	...	

SATURDAY, 3D MAY 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw $\frac{1}{2}$ w.	5	o	2	29.420	55.8	54.8	93	51.5	10	...	Nimb.	At noon, lat. 38° 34' N. long. 72° 16' W. Temperature by self-registering thermometer, max. 55° 5. min. 43° 5. Lightning from S.E to S.W.
4.	sw $\frac{1}{2}$ s.	4	o	2	29.450	54.8	54.3	96	50	10	...	Nimb.	
6.	sw $\frac{1}{2}$ s.	4	o	2	29.480	54.8	54.3	96	49.5	10	...	Nimb.	
8.	sw $\frac{1}{2}$ s.	4	o	2	29.460	53.8	53.3	97	50	10	...	Nimb.	
10.	sw $\frac{1}{2}$ w.	3	o	2	29.450	52.8	52.8	100	49.5	10	...	Nimb.	
Noon.	NE $\frac{1}{2}$ N.	4	o	2	29.420	47.8	47.8	100	49.5	10	...	Nimb.	
2.	NE $\frac{1}{2}$ N.	3	f	2	29.405	48.6	48.6	100	49.5	10	...	Str.	
4.	sw $\frac{1}{2}$ w.	3	f	2	29.439	47.8	47.3	97	50	10	...	Str.	
6.	S.N.W.	4	cp	2	29.549	44.3	43.5	94	49	10	...	Str.	
8.	sw $\frac{1}{2}$ w.	5	o	2	29.666	44.3	44.3	100	49	10	...	Nimb.	
10.	sw $\frac{1}{2}$ w.	4	c	2	29.680	43.8	41.3	81	51	10	...	Cum.	Sp. gr. 1.02504.
Midt.	sw $\frac{1}{2}$ w.	5	c	2	29.722	42.3	40.8	88	49	10	...	Cum.	
Totals.	...	45		25	6141	110.9	103.6	62	117.5	120			
Mean.	Variable.	4	o	2	29.512	49.2	48.6	95	49.8	10	...	Cum. str. & Nimb.	

SUNDAY, 4TH.

2.	sw $\frac{1}{2}$ w.	4	be	2	29.736	41.2	39.5	87	50	8	...	Cum.	At noon, lat. 39° 13' N. long. 71° 20' W. Temperature by self-registering thermometer, max. 46° 5. min. 40° 5. Current (three days), N. 24° E. 10'.
4.	sw $\frac{1}{2}$ w.	5	be	2	29.789	41.3	40.0	90	51	10	...	Cum.	
6.	N.	5	be	3	29.845	41.8	40.3	89	50	6	...	Cum.	
8.	N.	4	eq	2	29.898	41.8	39.8	85	44	9	...	Cum.	
10.	N.	4	be	3	29.955	43.5	40.8	79	43.5	4	...	Cum.	
Noon.	N.	3	bc	3	30.000	44.0	40.8	76	44	3	...	Cum.	
2.	N.	3	bc	2	30.000	45.8	42.8	79	51	2	Cir str.	...	
4.	N.	3	bc	2	30.040	45.8	40.8	67	47.5	1	Cir str.	...	
6.	N.	2	bc	2	30.052	46.3	41.3	67	52.5	1	Cir str.	...	
8.	Calm.	0	b	2	30.098	45.3	41.3	72	53	0	...	...	
10.	sw $\frac{1}{2}$ w.	1	b	2	30.156	45.8	41.8	73	52	0	...	...	Sp. gr. 1.02561.
Midt.	sw $\frac{1}{2}$ w.	2	b	2	30.154	47.8	43.8	73	51.5	0	...	...	
Totals.	...	36		27	11723	50.4	13.0	937	11.0	44			
Mean.	S.N.W.	3	be	2	29.977	44.2	41.1	78	49.2	4	Cir str.	Cum.	

MONDAY, 5TH.

2.	sw $\frac{1}{2}$ s.	2	b	1	30.146	48.8	46.3	83	51.5	0	...	...	At noon, lat. 39° 50' N. long. 69° 13' W. Current, S. 65° E. 17'. Temperature by self-registering thermometer, max. 54° 0. min. 44° 2.
4.	sw $\frac{1}{2}$ w.	2	b	1	30.143	49.6	46.3	77	51.5	0	...	...	
6.	sw $\frac{1}{2}$ s.	2	b	1	30.161	50.8	48.8	86	52.0	0	...	...	
8.	sw $\frac{1}{2}$ w.	3	b	1	30.198	52.3	49.3	80	49	0	...	...	
10.	sw $\frac{1}{2}$ w.	3	b	1	30.197	51.8	48.8	80	47	0	...	...	
Noon.	sw $\frac{1}{2}$ w.	3	b	1	30.194	51.8	48.3	77	45	0	...	...	
2.	sw $\frac{1}{2}$ s.	3	b	1	30.154	50.8	48.8	86	49	0	...	...	
4.	sw $\frac{1}{2}$ s.	4	b	2	30.138	53.8	50.8	80	49	0	...	...	
6.	sw $\frac{1}{2}$ s.	5	bc	2	30.142	50.8	47.8	80	42	1	Cir str.	...	
8.	sw $\frac{1}{2}$ w.	3	bc	2	30.143	48.0	45.8	84	41.5	2	...	Cum.&Str.	Sp. gr. 1.02561.
10.	Vble.	4	bc	2	30.147	46.3	43.8	83	41	3	...	Cum.&Str.	
Midt.	sw $\frac{1}{2}$ w.	3	bc	2	30.183	45.8	43.8	86	41.5	2	...	Cum.	
Totals.	...	37		17	1946	0.6	88.6	22	80.0	8			Sp. gr. 1.02561.
Mean.	sw $\frac{1}{2}$ w.	3	bc	1	30.162	50.0	47.4	82	46.7	1	Cir str.	Cum. & Str.	

TUESDAY, 6th May 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and corrected.	Thermometer.			Humidity, Sat. and 10.	Temperature of Sea Surface, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Wet Bulb.			Upper.	Lower.	
2.	w.s.w.	2	bc	1	30.193	43.8	41.8	84	39.5	42	...	Cum.	At noon, lat. 40° 17' S. long. 66° 48' W. Temperature by self-registering thermo- meter, max. 53° 7', min. 42°. Current, s. 20° E. 6'. 10.30, a brilliant halo round the sun, 41 in diameter, with a faint red tinge on the inner edge. Sp. gr. 1.02407. Heavy dew.
4.	swb.w.	1	bc	1	30.215	42.8	41.5	90	40	41	...	Cum. & Nb.	
6.	sb.w.	1	bc	1	30.233	42.0	41.3	94	39.5	5	...	...	
8.	xwb.w.	1	bc	1	30.260	43.6	41.5	81	40	7	Cir cum.	Cum. & Nb.	
10.	sb.w.	1	bc	1	30.311	45.8	43.8	86	40	3	...	Cum str.	
Noon.	sb.w.	1	bc	1	30.303	47.2	44.8	83	42	4	...	Cum str.	
2.	Calm.	0	bc	0	30.310	49.8	46.8	80	42	2	...	Cum.	
4.	sb.w.	2	bc	0	30.330	51.8	46.8	69	42	2	...	Cum.	
6.	sb.w.	1	b	0	30.319	47.8	44.5	77	42	0	...	...	
8.	North.	1	b	0	30.335	42.3	41.3	92	41.5	0	...	...	
10.	sb.w.	1	bw	0	30.354	41.8	40.8	92	42	0	...	...	
Midd.	Calm.	0	bw	0	30.351	41.5	40.8	94	41	0	...	...	
Totals.	...	12	bcnw		6	3514	60.2	35.7	1925	11.5	32	Cir cum.	Cum. & Cum str.
Mean. Variable.	...	1			1	30.293	45.0	43.0	85	40.9	3		

WEDNESDAY, 7th.

2.	sbw.w.	1	bc	0	30.342	41.8	39.8	85	41	2	Cum.	..	At noon, lat. 41° 15' S. long. 65° 45' W. Temperature by self-registering thermo- meter, max. 48°, min. 39° 5'. Current, S. 83° E. 8'. Sp. gr. 1.02422.
4.	sbw.w.	2	bc	0	30.335	41.8	39.8	85	41	1	Str.	...	
6.	sbw.w.	1	b	0	30.358	41.8	39.8	85	41.5	0	...	...	
8.	S.S.W.	1	b	0	30.374	44.8	42.8	85	42	0	...	...	
10.	S.S.W.	1	b	0	30.406	44.3	41.8	81	42.5	0	...	...	
Noon.	S.S.W.	1	b	0	30.410	45.8	42.8	79	42.8	0	...	...	
2.	S.E.	2	b	0	30.410	43.5	39.8	73	42	0	...	...	
4.	S.E.	3	bc	0	30.391	41.8	39.5	84	42	4	...	Cum str.	
6.	S.W.	2	b	0	30.412	41.8	36.8	66	42	0	...	...	
8.	sbw.w.	1	bc	0	30.417	40.0	34.0	57	42	1	Str.	...	
10.	sbw.w.	2	b	0	30.416	39.8	37.0	78	42	0	...	...	
Midd.	S.W.	1	b	0	30.430	38.3	36.8	87	39.2	0	...	...	
Totals.	...	18	bc		...	4701	25.5	110.7	945	20.0	8	Str.	Cum str.
Mean. Variable.	sbw.	2			0	30.392	42.1	39.2	79	41.7	1		

THURSDAY, 8th.

2.	S.E.	1	b	0	30.447	38.0	36.8	89	37.5	0	...	...	At noon, lat. 43° 2' S. long. 64° 2' W. Temperature by self-registering thermo- meter, max. 48° 5', min. 36°.
4.	NNE.E.	2	b	0	30.448	38.0	35.8	81	37	0	...	...	
6.	NNE.E.	2	b	0	30.465	37.8	35.8	83	37	0	...	...	
8.	NNE.E.	1	b	0	30.495	41.8	39.8	85	37	0	...	...	
10.	Variable.	1	b	0	30.512	41.5	38.3	76	38	0	...	...	
Noon.	Variable.	0	b	0	30.483	44.3	40.5	73	38	0	...	...	
2.	S.S.W.	1	b	0	30.446	45.8	41.8	73	38.8	0	...	...	
4.	swb.w.	1	b	0	30.426	45.3	42.3	78	38.8	0	...	...	
6.	W.S.	2	b	0	30.380	42.8	39.8	78	37.5	0	...	...	
8.	W.S.	3	b	0	30.359	41.8	37.8	72	37	0	...	...	
10.	swb.w.	4	b	0	30.344	39.8	37.8	84	38	0	...	...	
Midd.	W.S.	5	b	0	30.345	40.8	37.8	77	38	0	...	...	
Totals.	...	23	b		...	5150	17.7	104.3	949	92.6	...	...	
Mean. Variable.	...	2			0	30.429	41.5	38.7	79	37.7	0		

## FRIDAY, 9TH MAY 1873.

Hour.	Wind		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	whs N.	2	b	...	30.328	39.3	37.8	88	38	0	...	...	At Halifax. Temperature by self-registering thermo- meter, max. 64°, min. 37°. 10.30 A.M., arrived at Halifax, Nova Scotia, and secured the ship to coal jetty.
4.	whs N.	2	b	...	30.326	38.0	36.5	87	37.5	0	...	...	
6.	whs N.	2	b	...	30.306	40.0	38.3	87	35	0	...	...	
8.	SSW 1/2 W.	2	b	...	30.295	40.3	38.8	88	36	0	...	...	
10.	Calu.	0	b	...	30.296	46.8	42.8	73	...	0	...	...	
Noon.	Calu.	0	b	...	30.271	58.8	48.8	49	...	0	...	...	
2.	Calu.	0	b	...	30.270	59.8	49.8	50	...	0	...	...	
4.	Calu.	0	b	...	30.255	59.8	49.8	50	...	0	...	...	
6.	Calu.	0	b	...	30.280	59.3	48.3	46	...	0	...	...	
8.	Calu.	0	b	...	30.283	52.8	47.8	69	...	0	...	...	
10.	Calu.	0	b	...	30.297	50.8	44.8	63	...	0	...	...	
Midd.	SE 1/2 E.	1	b	...	30.312	48.8	42.8	62	...	0	...	...	
Totals.	...	9	b	...	3519	594.5	46.3	813	146.5	0	...	...	
Mean.	Variable.	1	...	...	30.293	49.5	43.9	68	36.6	0	...	...	

## SATURDAY, 10TH.

2.	Calu.	0	b	...	30.321	45.3	41.8	75	...	0	...	...	...	At Halifax. Temperature by self-registering thermo- meter, max. 54° 5, min. 38° 5.
4.	Calu.	0	b	...	30.348	41.3	39.8	89	...	0	...	...	...	
6.	Calu.	0	...	...	30.343	44.3	41.8	81	...	...	...	...	...	
8.	Calu.	0	...	...	30.353	...	...	...	...	...	...	...	...	
10.	SE 1/2 S.	2	be	...	30.370	48.0	44.5	76	...	3	Cir str.	...	...	
Noon.	SE 1/2 S.	3	be	...	30.374	45.3	42.5	81	...	5	Cir str.	Cum.	...	
2.	SE 1/2 E.	12	b	...	30.366	44.8	42.8	85	...	0	...	...	...	
4.	SE 1/2 E.	12	b	...	30.353	44.3	42.8	89	...	0	...	...	...	
6.	SE 1/2 E.	1	b	...	30.325	42.8	41.3	88	...	0	...	...	...	
8.	...	...	...	...	...	...	...	...	...	...	...	...	...	
10.	SE 1/2 S.	12	be	...	30.319	41.8	39.8	85	...	7	...	Cir cum.	...	
Midd.	SE 1/2 S.	3	be	...	30.291	42.0	40.8	90	...	8	...	Cum str.	...	
Totals.	...	15	be	...	3763	39.9	17.9	839	...	23	Cir str.	Cum.	...	
Mean.	SE 1/2 S.	1	...	...	30.342	44.0	41.8	84	...	3	...	...	...	

## SUNDAY, 11TH.

2.	SE 1/2 S.	1	bcp	...	30.261	41.8	40.8	92	...	5	...	Cum.	...	At Halifax. Temperature by self-registering thermo- meter, max. 46° 2, min. 40° 8.
4.	SE 1/2 S.	1	be	...	30.244	41.8	40.8	92	...	5	...	Cum.	...	
6.	SE 1/2 S.	3	be	...	30.225	41.8	40.3	88	...	4	...	Cum.	...	
8.	SE 1/2 S.	2	bol	...	30.171	42.8	42.3	96	...	3	...	Cum.	...	
10.	SE 1/2 E.	1	or	...	30.176	44.8	44.8	100	...	10	...	Nimb.	...	
Noon.	Calu.	0	or	...	30.143	45.8	45.8	100	...	10	...	Nimb.	...	
2.	SE 1/2 S.	1	or	...	30.109	45.8	45.8	100	...	10	...	Str.	...	
4.	SE 1/2 S.	1	or	...	30.116	44.8	44.8	100	...	10	...	Str.	...	
6.	SE 1/2 E.	1	odf	...	30.055	44.8	44.8	100	...	10	...	Str.	...	
8.	SE 1/2 E.	1	odf	...	29.994	44.8	44.8	100	...	10	...	Str.	...	
10.	Calu.	0	odf	...	30.014	44.8	44.8	100	...	10	...	Str.	...	
Midd.	Calu.	0	odf	...	29.972	44.8	44.8	100	...	10	...	Str.	...	
Totals.	...	12	or	...	1480	48.6	44.6	1168	...	97	...	Cum., Nimb., & Str.	...	
Mean.	SE 1/2 S.	1	...	...	30.123	44.0	43.7	97	...	8	...	...	...	

## MONDAY, 12TH MAY 1873.

Hour.	Wind		Weather.	State of Sea.	Barometer reduced to 32 and Sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.			Clouds, 6 to 10.	Upper.	
2.	sby l.	1	off	...	29.869	44.8	44.8	100	...	10	...	At Halifax. Temperature by self-registering thermometer, max. 52.8, min. 43.8.
4.	sby l.	1	off	...	29.841	44.8	44.8	100	...	10	...	
6.	ssr l.	1	off	...	29.776	45.8	45.8	100	...	10	...	
8.	ssr l.	1	off	...	29.713	46.0	46.0	100	...	10	...	
10.	ssr l.	1	off	...	29.713	45.8	45.8	100	...	10	...	
Noon.	ssr l.	1	off	...	29.715	45.8	45.8	100	...	10	...	
2.	sby l.	2	omf	...	29.597	45.8	45.8	100	...	10	...	
4.	sby l.	2	omf	...	29.597	45.8	45.8	100	...	10	...	
6.	Calm.	0	fd	...	29.554	48.3	47.8	97	...	10	...	
8.	Calm.	0	fd	...	29.561	45.8	45.8	100	...	10	...	
10.	Calm.	0	f	...	29.561	45.3	45.3	100	...	10	...	
Midd.	Calm.	0	f	...	29.558	45.0	45.0	100	...	10	...	
Totals.	...	10	...	...	8055	69.0	68.5	1197	...	120	...	
Mean.	sby l.	1	off	...	29.671	45.7	45.7	99	...	10	Str.	

## TUESDAY, 13TH.

2.	sby l.	1	of	...	29.546	43.8	43.8	100	...	10	...	Str.	At Halifax. Temperature by self-registering thermometer, max. 65.7, min. 43.7.
4.	Calm.	0	off	...	29.539	43.8	43.8	100	...	10	...	Str.	
6.	wby l.	2	be	...	29.523	46.0	45.8	98	...	7	...	Cum str.	
8.	wby l.	1	oe	...	29.535	50.3	49.3	93	...	10	...	Cum.	
10.	xwby l.	2	ed	...	29.543	51.8	49.8	86	...	10	...	Cum.	
Noon.	xwby l.	2	e	...	29.556	53.3	49.8	77	...	10	...	Cum.	
2.	xwby l.	2	be	...	29.531	50.8	51.8	58	...	5	...	Cum str.	
4.	xwby w	2	be	...	29.507	62.8	53.3	53	...	4	...	Cum.	
6.	xwby w	1	b	...	29.496	64.8	53.3	46	...	0	...	...	
8.	Calm.	0	be	...	29.511	52.8	49.3	77	...	7	...	Cum str.	
10.	Calm.	0	...	...	29.478	50.8	47.8	80	...	...	...	Cum str.	
Midd.	sswby w.	2	...	...	29.436	46.8	46.3	97	...	...	...	Cum str.	
Totals.	...	15	...	...	6201	626.8	104.1	965	...	73	...	Cum. & Cum str.	
Mean.	Westly.	1	bedf	...	29.517	52.2	48.7	89	...	7	...	...	

## WEDNESDAY, 14TH.

2.	sswby w.	1	be	...	29.426	46.8	45.8	93	...	6	...	Cum str.	At Halifax. Cn. & Nb. Temperature by self-registering thermometer, max. 56.7, min. 45.9.
4.	Calm.	0	be	...	29.441	47.8	46.3	89	...	5	...	Cum.	
6.	xwby l.	3	...	...	29.496	47.8	45.8	86	...	...	...	...	
8.	xwby w	4	be	...	29.464	49.8	44.8	68	...	3	...	Cir.	
10.	xwby l.	3	be	...	29.464	51.8	45.3	62	...	2	...	Cir.	
Noon.	xwby l.	3	be	...	29.469	53.8	45.3	53	...	2	...	Cir.	
2.	xwby l.	3	be	...	29.461	55.3	46.8	54	...	2	...	Cir.	
4.	xwby w.	4	be	...	29.460	53.8	45.8	55	...	3	...	Cir.	
6.	xwby l.	3	be	...	29.470	51.8	45.0	60	...	3	...	Cir.	
8.	sswby w	1	be	...	29.490	46.8	43.3	76	...	1	...	Cir.	
10.	sswby w	1	be	...	29.524	43.8	40.8	77	...	2	...	Cum.	
Midd.	Calm.	0	be	...	29.511	42.8	40.8	84	...	1	...	Cir.	
Totals.	...	26	be	...	5666	112.1	55.8	857	...	30	...	Cir.	Cum.
Mean.	xwby w.	2	...	...	29.472	49.3	44.6	71	...	3	...	...	

## THURSDAY, 15TH MAY 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity.	Sea.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	wh <sup>2</sup> s.	1	bc	...	29.499	43.8	41.8	84	...	...	6	...	Cum str.	At Halifax. Temperature by self-registering thermometer, max. 59°, min. 40°.
4.	wh <sup>2</sup> s.	1	bc	...	29.490	41.8	39.8	85	...	...	6	...	Cum str.	
6.	wh <sup>2</sup> s.	1	bc	...	29.475	42.8	40.8	84	...	...	9	...	Cum.	
8.	sw <sup>1</sup> W.	2	bc	...	29.464	43.8	40.5	75	...	...	9	...	Cum.	
10.	sw <sup>1</sup> W	1	cpr	...	29.454	45.8	42.8	79	...	...	10	...	Cum str.	
Noon.	W <sup>2</sup> S.	1	cpr	...	29.466	45.8	45.3	96	...	...	10	...	Cum str.	
2.	W <sup>2</sup> S.	1	cuph	...	29.487	44.8	43.0	86	...	...	6	...	Cum.	
4.	W <sup>2</sup> S.	1	bc	...	29.569	48.8	45.8	79	...	...	5	...	Cum.	
6.	W <sup>2</sup> S.	1	bc	...	29.586	48.5	44.8	75	...	...	5	...	Cum.	
8.	W <sup>2</sup> S.	1	bc	...	29.587	48.8	42.8	79	...	...	6	...	Cum.	
10.	W <sup>2</sup> S.	1	bc	...	29.638	43.8	41.8	84	...	...	4	...	Cum.	11 P.M. a fine aurora borealis, white, stretching from north to east, shooting up rays of light to an elevation of 39° above the horizon.
Midt.	sw <sup>1</sup> W	1	bc	...	29.660	42.3	40.3	85	...	...	4	...	Cum.	
Totals.	...	15	...	...	6375	57.8	29.5	991	...	80	...	...	Cum. & Cum str.	
Mean.	W.N.W.	1	bcp	...	29.531	44.8	42.5	83	...	7	...	...	Cum. & Cum str.	

## FRIDAY, 16TH.

2.	sw <sup>1</sup> W	1	bc	...	29.683	40.8	39.3	88	...	...	5	...	Cum str.	At Halifax. Temperature by self-registering thermometer, max. 61°, min. 39°.
4.	sw <sup>1</sup> W	1	bc	...	29.711	40.3	38.8	88	...	...	1	...	Cum str.	
6.	Calu.	0	bcm	...	29.712	45.8	42.8	79	...	...	1	...	Cum.	
8.	sw <sup>1</sup> W	1	bc	...	29.688	54.8	48.8	65	...	...	1	...	Cum.	
10.	sw <sup>1</sup> W	1	bc	...	29.683	57.8	52.8	71	...	...	4	...	Cum.	
Noon.	wh <sup>2</sup> s.	2	bc	...	29.674	57.8	52.3	69	...	...	4	...	Cum.	
2.	sw <sup>1</sup> W.	2	c	...	29.725	55.3	49.3	65	...	...	9	...	Cum str.	
4.	sw <sup>1</sup> W.	1	c	...	29.730	52.8	46.8	64	...	...	10	...	Cum str.	
6.	NNE <sup>1</sup> E.	1	c	...	29.729	53.0	49.3	76	...	...	9	...	Cum str.	
8.	NNE <sup>1</sup> E.	1	c	...	29.730	50.8	46.8	74	...	...	10	...	Cum str.	
10.	Calu.	0	o	...	29.733	47.8	45.8	86	...	...	10	...	Nimb.	
Midt.	Variable.	1	oe	...	29.761	45.8	43.8	86	...	...	8	...	Nimb.	
Totals.	...	12	...	...	8579	2.8	76.6	911	...	72	...	...	Cum., Cum str., & Nimb.	
Mean.	Westly.	1	bc	...	29.715	50.2	46.4	76	...	6	...	...	Cum., Cum str., & Nimb.	

## SATURDAY, 17TH.

2.	sw <sup>1</sup> W.	1	bc	...	29.742	41.8	40.8	92	...	...	8	...	Cum str.	At Halifax. Temperature by self-registering thermometer, max. 49°, min. 39° 5.
4.	sw <sup>1</sup> W.	1	bc	...	29.729	43.5	41.0	81	...	...	8	...	Cum str.	
6.	Calu.	0	bc	...	29.737	43.8	41.5	73	...	...	8	...	Cum str.	
8.	Calu.	0	bc	...	29.732	44.8	42.8	85	...	...	8	...	Cum str.	
10.	sw <sup>1</sup> W.	2	bc	...	29.716	46.8	41.8	86	...	...	8	...	Cum.	
Noon.	sw <sup>1</sup> E.	2	bc	...	29.718	44.8	42.8	85	...	...	8	...	Cum.	
2.	sw <sup>1</sup> E.	2	bc	...	29.721	40.8	40.3	96	...	...	8	...	Cum.	
4.	sw <sup>1</sup> E.	1	oe	...	29.724	40.8	39.8	92	...	...	10	...	Cum.	
6.	sw <sup>1</sup> E.	1	oe	...	29.706	39.8	38.8	92	...	...	10	...	Cum.	
8.	sw <sup>1</sup> E.	1	o	...	29.760	39.5	39.3	99	...	...	10	...	Str.	
10.	Vble.	1	cf	...	29.762	40.8	39.8	92	...	...	9	...	Nimb.	
Midt.	Calu.	0	cf	...	29.762	41.8	40.8	92	...	...	7	...	Cum str.	
Totals.	...	12	...	...	8809	29.0	12.5	1065	...	102	...	...	Cum. & Cum str.	
Mean.	Variable.	1	bef	...	29.734	42.4	41.0	89	...	9	...	...	Cum. & Cum str.	

## SUNDAY, 18TH May 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Do.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Clouds, 0 to 10.	Upper. Lower.	
2.	S <sup>by</sup> E.	2	bc	...	29.773	41.8	49.8	92	...	7	...	Cum.	At Halifax. Temperature by self-registering thermo- meter, max. 56°, min. 38° 5.
4.	S <sup>by</sup> E.	2	bc	...	29.760	39.8	38.8	92	...	8	...	Cum.	
6.	S <sup>by</sup> W.	2	bc	...	29.778	40.3	38.8	88	...	9	...	Cum.	
8.	S <sup>by</sup> E.	2	bc	...	29.776	45.8	42.8	79	...	6	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	S <sup>by</sup> E.	3	c	...	29.736	51.8	45.8	64	...	9	...	Cum.	
2.	NW <sup>by</sup> N.	1	c	...	29.725	54.8	47.8	60	...	10	...	Cum.	
4.	NW <sup>by</sup> W.	1	c	...	29.709	54.8	47.8	60	...	9	...	Cum.	
6.	W <sup>by</sup> S.	1	bc	...	29.712	52.0	46.8	68	...	9	...	Cum.	
8.	NW <sup>by</sup> W.	2	c	...	29.730	48.8	45.8	79	...	8	...	Cum.	
10.	Calm.	0	oz	...	29.780	47.8	44.8	79	...	10	...	Nimb.	
Midt.	Calm.	0	bc	...	29.785	46.4	44.5	86	...	4	...	Cum str.	
Totals.	...	16	bc	...	8304	84.1	44.5	847	...	89	...	Cum.	
Mean. Variable.	1			...	29.755	47.6	44.0	77	...	8	...	Cum.	

## MONDAY, 19TH.

2.	Calm.	0	bc	...	29.771	44.8	42.8	85	...	9	...	Cum str.	At Halifax. Temperature by self-registering thermo- meter, max. 52°, min. 39° 5.
4.	S <sup>by</sup> W.	1	c	...	29.764	44.8	42.8	85	...	9	...	Cum str.	
6.	S <sup>by</sup> W.	1	bc	...	29.772	45.8	43.8	86	...	6	...	Cum.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	N <sup>by</sup> E.	3	bcq	...	29.788	48.8	44.8	73	...	6	...	Cum.	
Noon.	NNE <sup>by</sup> E.	5	bcq	...	29.781	48.3	45.3	79	...	5	...	Cum.	
2.	S <sup>by</sup> W.	3	ocqs	...	29.823	43.8	42.8	92	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	S <sup>by</sup> W.	4	qnp	...	29.875	41.8	40.8	...	...	...	...	...	
8.	N <sup>by</sup> E.	4	bc	...	29.943	40.3	39.3	92	40	8	...	Cum str.	
10.	N.	4	bc	...	29.960	39.2	38.2	92	39	5	...	Cum str.	
Midt.	N.	4	bc	...	29.977	38.8	37.8	92	39	4	...	Cum str.	
Totals.	...	29	bcq	...	8454	36.4	18.4	868	11.8	52	...	Cum. & Cum str.	
Mean. Northly.	3			...	29.845	43.6	41.8	87	39.3	6	...	Cum. & Cum str.	

## TUESDAY, 20TH.

2.	N.	4	o	1	29.993	38.8	36.3	80	40	10	...	Cum.	At noon, lat. 43° 3' N. long. 63° 39' W. Temperature by self-registering thermo- meter, max. 50° 5, min. 37° 8. Current, S. 39° W. 12'. Sp. gr. 1.02357.
4.	N.	4	o	1	30.031	38.8	37.3	88	40	9	...	Cum.	
6.	N.	4	o	...	30.095	39.8	38.8	92	40.5	10	...	Cum.	
8.	N.	4	e	...	30.093	44.3	39.8	69	40.5	10	...	Cum.	
10.	N.	3	bc	...	30.151	44.8	41.8	78	40.5	10	...	Cum.	
Noon.	N.	3	bc	...	30.171	44.3	41.8	81	40.5	2	...	Cum str.	
2.	N <sup>by</sup> W.	2	bc	...	30.192	45.0	43.0	85	40.8	4	Str.	Cum.	
4.	N <sup>by</sup> W.	1	bc	...	30.229	47.8	45.3	83	42.0	2	...	Str.	
6.	N.N.W.	2	bc	...	30.249	45.3	43.8	89	41.5	2	...	Cum.	
8.	W.	2	bc	...	30.267	43.3	42.3	92	42.0	2	...	Cum str.	
10.	W.	2	bc	...	30.307	42.3	41.8	96	42.0	3	Cir cum.	...	
Midt.	W.	2	bc	...	30.318	41.8	41.8	100	42.0	4	...	Cum.	
Totals.	...	33	bc	2	2096	36.3	13.8	1033	12.3	68	Cir cum. & Str.	Cum.	
Mean. N.N.W.	3			1	30.175	43.0	41.1	86	41.0	6	...	Cum.	

WEDNESDAY, 21<sup>ST</sup> MAY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Description of Clouds.		REMARKS.	
	True Direction.	Force.				Dry Bulb.	Damp Bulb.			Clouds, 0 to 10.	Upper.		Lower.
2.	swbw $\frac{1}{2}$ w	2	b	0	30.334	42.0	41.3	94	41.5	0	...	...	At noon, lat. 42° 10' N. long. 63° 39' W. Temperature by self-registering thermo- meter, max. 53°, min. 40° 5. Current, s. 26'. Sp. gr. 1.02453.
4.	xbw $\frac{1}{2}$ w.	1	bc	0	30.339	41.3	40.8	96	41	2	...	Str.	
6.	swbw $\frac{1}{2}$ w	1	b	0	30.389	42.8	42.3	96	41	0	...	...	
8.	xbw $\frac{1}{2}$ w.	1	...	0	30.437	44.8	43.8	92	45	...	...	...	
10.	xbw $\frac{1}{2}$ w.	1	b	0	30.430	47.8	45.8	86	45.5	0	...	...	
Noon.	Calm.	0	bc	0	30.429	49.3	46.8	83	46.5	...	...	...	
2.	sw $\frac{1}{2}$ w.	1	b	0	30.421	51.8	47.8	74	48	0	...	...	
4.	sw $\frac{1}{2}$ w.	1	b	0	30.420	50.8	47.8	80	48.5	0	...	...	
6.	sw $\frac{1}{2}$ w.	1	b	0	30.411	49.3	45.8	76	47	0	...	...	
8.	sw $\frac{1}{2}$ w.	1	b	0	30.416	48.0	46.3	88	47	0	...	...	
10.	sw $\frac{1}{2}$ w.	2	bc	0	30.417	47.0	45.8	92	47.5	1	...	Cm. & str.	
Midt.	sw $\frac{1}{2}$ w.	1	bc	0	30.411	47.8	46.0	88	48	1	...	Cm. & str.	
Totals.	...	13	bc	0	4854	82.7	60.3	1045	66.5	4	...	Cum. & Str.	
Mean.	West.	1		0	30.404	46.9	45.0	87	45.5	0			

THURSDAY, 22<sup>ND</sup>.

2.	ssw $\frac{1}{2}$ w.	1	bc	0	30.416	48.3	45.8	83	48	1	...	Str.	At noon, lat. 41 19' N. long. 63° 11' W. Temperature by self-registering thermo- meter, max. 61°, min. 46° 7. Current, s. 33° E. 10'. Misty over horizon. Sp. gr. 1.02625.
4.	ssw $\frac{1}{2}$ E.	1	bc	0	30.393	48.8	47.8	93	50	1	...	Str.	
6.	ssw $\frac{1}{2}$ E.	1	bc	0	30.414	50.8	47.8	86	54.5	1	...	Cum str.	
8.	ssw $\frac{1}{2}$ E.	2	bc	0	30.416	54.8	51.3	77	57	5	...	Cum str.	
10.	ssw $\frac{1}{2}$ E.	2	bc	0	30.411	56.8	52.8	75	57	4	...	Cir.	
Noon.	ssw $\frac{1}{2}$ E.	3	bc	0	30.392	59.8	54.8	71	59.5	2	...	Cum.	
2.	wbs $\frac{1}{2}$ s.	3	bc	2	30.341	59.3	54.8	74	60.5	3	...	Cum.	
4.	wbs $\frac{1}{2}$ s.	4	bc	2	30.308	58.8	54.3	74	62.5	6	...	Cum.	
6.	s $\frac{1}{2}$ w.	4	bc	1	30.305	58.8	55.8	82	62.5	8	...	Cum.	
8.	ssw $\frac{1}{2}$ E.	4	c	0	30.301	59.8	57.3	85	61.5	10	...	Cum str.	
10.	ssw $\frac{1}{2}$ E.	3	c	0	30.299	59.5	58.5	94	59.5	10	...	Cum.	
Midt.	s $\frac{1}{2}$ w.	1	bc	0	30.292	59.8	56.8	82	54.0	5	...	Cum.	
Totals.	...	29	bc	5	4288	75.3	37.8	970	86.5	56	...	Cir.	Cum. & Str.
Mean.	Southly.	2		0	30.357	56.3	53.1	81	57.2	5			

FRIDAY, 23<sup>RD</sup>.

2.	s $\frac{1}{2}$ E.	3	bc	2	30.194	64.8	61.3	80	69.5	6	...	Cum.	At noon, lat. 39° 44' N. long. 63° 22' W. Temperature by self-registering thermo- meter, max. 71.5, min. 58° 5. Current, s. 25° E. 25'. Sp. gr. 1.02719.
4.	sh $\frac{1}{2}$ E.	4	bcq	2	30.184	65.8	62.8	83	70.5	7	...	Cum.	
6.	s $\frac{1}{2}$ E.	4	bc	2	30.206	66.8	64.0	84	71.0	9	...	Nimb.	
8.	s $\frac{1}{2}$ w.	4	bcq	2	30.184	67.3	65.3	88	71.0	10	...	Cum.&Nl.	
10.	s $\frac{1}{2}$ w.	3	bc	2	30.167	67.3	62.8	80	67.2	5	...	Cum str.	
Noon.	s $\frac{1}{2}$ w.	2	bc	1	30.147	68.2	65.8	86	67.2	8	...	Cir.	
2.	ssw $\frac{1}{2}$ w.	2	bcp	1	30.103	69.3	67.3	88	67.5	8	...	Cir.	
4.	ssw $\frac{1}{2}$ w.	3	bcp	1	30.094	69.8	67.8	88	68.0	9	...	Cir.	
6.	s $\frac{1}{2}$ w.	2	bc	3	30.044	69.8	68.3	91	67.8	7	...	Cir.	
8.	s $\frac{1}{2}$ w.	3	c	4	30.039	69.8	68.8	94	67.5	9	...	Cum.	A swell from southward.
10.	ssw $\frac{1}{2}$ w.	2	bcp	4	30.040	70.2	69.2	94	68.5	9	...	Cum.	
Midt.	ssw $\frac{1}{2}$ w.	4	ocp	3	30.045	70.3	69.3	94	70.5	10	...	Nimb.	
Totals.	...	36	bcqp	26	1447	99.4	72.7	90	106.2	97	...	Cir.	Cum., Cum str., & Nimb.
Mean.	sbw.	3		2	30.121	68.3	66.1	87	68.8	8			

## SATURDAY, 24TH MAY 1873.

Hour	Wind.		Weather.	State of Sky, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	s.s.w.w.	4	op	3	30.031	70.3	68.8	91	71.2	10	...	Cum.	At noon, lat. 38° 32' N. long. 63° 36' W. Temperature by self-registering thermometer, max. 72° 2', min. 68° 5'. Current, S. 8 E. 22°.
4.	s.s.w.w.	3	op	3	30.011	69.0	68.0	94	67.0	10	...	Cum.	
6.	s.w.w.w.	5	op	4	29.992	69.8	68.8	94	71	10	...	Cum.	
8.	s.w.w.w.	4	op	4	29.982	...	...	...	73.5	...	...	...	
10.	s.w.w.w.	7	ocp	4	29.978	71.8	71.8	100	73	10	...	Nimb.	
Noon.	s.w.w.w.	7	ocp	5	29.988	70.8	69.8	94	72.8	10	...	Nimb.	
2.	s.w.w.w.	7	bcq	5	29.949	71.8	70.5	93	72.8	7	Cir.	Cum str.	
4.	s.w.w.w.	4	bcq	4	29.967	71.3	70.3	94	73	6	Cir.	Cum.	
6.	s.s.w.w.	7	bcq	5	29.968	70.3	69.3	94	73	8	...	Cum.	
8.	s.s.w.w.	6	e	4	29.952	69.8	69.3	97	67	9	...	Cum.	
10.	s.w.w.w.	6	ocp	4	29.998	70.8	69.8	94	67	10	...	Nimb.	
Midt.	s.w.w.w.	6	op	4	29.991	69.8	69.8	100	72	10	...	Nimb.	
Totals.	...	73		49	11810	5.5	106.2	1045	13.3	100			
Mean.	s.s.w.w.	6	ocp	4	29.984	70.5	69.7	95	71.1	9	Cir.	Cum. & Nimb.	

## SUNDAY, 25TH.

2.	s.s.w.w.	6	ocp	4	29.937	68.3	68.3	100	67	10	...	Nimb.	At noon, lat. 37° 9' N. long. 62° 30' W. Temperature by self-registering thermometer, max. 73° 7', min. 66° 5'. Current, S. 75° E. 32°.
4.	s.s.w.w.	7	ocp	5	29.932	68.0	68.0	100	66.5	10	...	Cum.	
6.	s.s.w.w.	6	...	...	29.909	67.8	67.8	100	66.2	5	...	Cum.	
8.	s.w.w.w.	7	...	...	29.943	68.0	68.0	100	64.5	7	...	Cum.	
10.	s.w.w.w.	6	ocp	3	29.923	68.8	68.8	100	66.5	9	...	Cum.	
Noon.	s.w.w.w.	4	om	3	29.949	70.8	70.3	97	67.5	9	...	Cum.	
2.	s.w.s.w.	4	bc	3	29.955	72.8	71.8	94	69	7	Cir.	Cum.	
4.	s.w.w.w.	3	bc	3	29.965	73.2	71.8	92	69.5	5	Cir.	Cum.	
6.	s.w.s.w.	4	bc	3	30.026	72.8	70.8	89	69.5	5	Cir.	Cum.	
8.	s.w.s.w.	3	bc	3	29.989	70.8	69.8	94	68.2	5	Cir str.	Cum.	
10.	s.w.s.w.	3	oc	3	29.987	70.3	69.8	97	68	7	...	Cum.	
Midt.	s.w.w.w.	3	oc	3	29.999	70.8	70.3	97	67.5	7	...	Cum.	
Totals.	...	56		33	11514	2.4	115.5	80	89.9	86			
Mean.	s.w.s.w.	5	ocp	3	29.959	70.2	69.6	97	67.5	7	Cir str.	Cum.	

## MONDAY, 26TH.

2.	w.b.s.s.	3	bc	3	30.018	70.8	68.8	88	66.5	5	...	Str.	At noon, lat. 36° 30' N. long. 63° 40' W. Temperature by self-registering thermometer, max. 76°, min. 69° 2'. Current, S. 61° E. 8°.
4.	w.s.s.	4	bc	2	30.016	71.3	70.8	97	70.5	2	Cir str.	...	
6.	w.s.s.	3	bcm	1	30.067	71.8	70.8	94	72	3	Cir str.	Cum.	
8.	w.s.s.	2	bcm	1	30.102	72.3	71.0	93	72	6	Cir str.	Cum.	
10.	w.s.s.	1	bcp	1	30.113	72.8	71.3	91	72.5	6	Cir.	Cum & Str.	
Noon.	w.s.s.	2	bcp	1	30.122	74.8	72.3	86	73	5	Cir.	Cum & Str.	
2.	s.w.w.w.	2	bc	1	30.113	74.8	72.8	89	73.5	3	Cir.	...	
4.	s.w.s.w.	1	bc	1	30.097	74.8	72.8	89	73.5	4	Cir cum.	...	
6.	s.w.w.	2	bc	1	30.119	73.8	71.8	89	73.2	5	...	Nimb.	
8.	s.s.w.w.	2	bc	1	30.135	71.8	70.8	94	73.0	8	...	Cum & Nib.	
10.	s.s.w.w.	1	bc	1	30.165	71.8	70.8	94	72.0	8	...	Cum str.	
Midt.	s.s.w.w.	1	bc	1	38.144	71.8	70.8	94	72.0	3	...	Cum.	
Totals.	...	24		15	1211	32.6	14.8	1098	23.7	58			
Mean.	s.w.w.w.	2	bcm	1	30.101	72.7	71.2	91	72.0	5	Cir str.	Cum. & Cum str.	

TUESDAY, 27TH MAY 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometre- corrected to 32° and reduced.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb	Damp Bulb				Upper.	Lower.	
2.	ssw.	2	oe	1	30.129	71.3	70.3	94	72.5	6	...	Cum.	At noon, lat. 34° 51' N. long. 63° 59' W. Temperature by self-registering thermo- meter, max. 72.8, min. 69.0.
4.	ssw.	2	oem	1	30.124	70.3	69.8	97	72.5	4	...	Cum.	
6.	swbw.	1	bcp	0	30.176	69.8	69.8	100	70.5	7	Cir.	Str. cum.	Current, N. 52° E. 7.
8.	swbs.	1	be	0	30.206	71.3	70.8	97	71.5	8	...	Cum. str.	
10.	swbs.	1	e	0	30.192	71.3	70.5	96	70.5	10	...	Cum. str.	Sp. gr. 1.02721.
Noon.	swbs.	1	be	0	30.190	72.0	70.5	92	71	8	...	Cum. str.	
2.	swbs.	1	be	0	30.171	71.5	70.8	96	72	8	...	Cum. str.	Cum. & Nb.
4.	swbs.	1	o	0	30.163	72.0	71.3	96	72	10	...	Cum.	
6.	swbs.	1	be	0	30.156	72.8	71.8	94	72	8	Cir.	Cum. & Nb.	Cum. & Nb.
8.	swbs.	1	be	0	30.158	71.3	70.8	97	71	7	...	Cum. & Nb.	
10.	swbw.	1	bcm	0	30.172	70.8	70.5	99	70	5	...	Cum. & Nb.	Cum.
Midd.	ssw.	1	bcm	0	30.180	70.8	70.0	95	70.2	4	Str.	Cum.	
Totals.	...	14	bcmp	2	2008	15.2	6.9	73	15.7	85	Cir. str.	Cum. str. & Nimb.	
Mean.	swbs.	1		0	30.167	71.3	70.6	96	71.3	7			

WEDNESDAY, 28TH.

2.	ssw.	1	be	0	30.179	69.8	69.3	97	69.8	4	...	Cum.	At noon, lat. 33° 20' N. long. 64° 37' W. Temperature by self-registering thermo- meter, max. 76°, min. 69°.
4.	sw.	2	be	0	30.177	70.3	69.8	97	69.2	6	...	Cum.	
6.	Calm.	0	be	0	30.190	70.3	70.3	100	69	8	Cir.	Cum. str.	Current, N. 54° W. 8.
8.	swbs.	1	be	0	30.216	70.5	70.3	99	69.5	9	Str.	Cum.	
10.	swbs.	1	be	0	30.210	73.8	72.8	94	70.5	6	Cir. str.	Cum.	Sp. gr. 1.02716.
Noon.	swbw.	1	be	0	30.206	74.8	72.8	89	70.5	5	Cir.	Cum. str.	
2.	sw.	1	be	0	30.189	74.0	71.8	88	70.2	6	Cir. str.	Cum. str.	Cum. str.
4.	s.	1	be	0	30.189	73.6	71.8	90	70.5	7	Cir.	Cum. str.	
6.	sse.	1	be	0	30.182	74.8	73.5	93	71.5	4	Cir.	Cum. str.	Cum.
8.	sebs.	1	be	0	30.163	73.3	72.8	97	71	6	...	Cum.	
10.	swbs.	1	be	0	30.182	72.8	72.8	100	71	4	...	Nimb.	Cum.
Midd.	swbs.	2	be	0	30.205	71.8	71.3	97	72	5	...	Cum.	
Totals.	...	13	be	0	2288	29.8	19.3	61	44.7	70	Cir. str.	Cum. & Cum. str.	
Mean.	ssw.	1		0	30.191	72.5	71.6	95	70.4	6			

THURSDAY, 29TH.

2.	sw.	1	belmw	0	30.172	72.8	72.3	97	72.8	4	...	Cum.	At noon, lat. 32° 9' N. long. 65° 0' W. Temperature by self-registering thermo- meter, max. 78.5, min. 71.5.
4.	sw.	1	belmw	0	30.184	72.8	71.8	94	72	8	Str.	Cum.	
6.	swbw.	1	be	0	30.201	73.8	72.8	94	71.5	6	...	Cum.	Lightning to north-eastward. Heavy dew.
8.	sbe.	1	be	0	30.216	74.3	73.0	92	72	4	Str.	Cum.	
10.	sbe.	1	...	0	...	...	...	...	71.5	...	...	...	Cum.
Noon.	swbs.	1	be	0	30.238	75.3	74.0	92	72.5	3	Cir. cum.	Cum.	
2.	swbs.	2	be	0	30.213	75.8	74.8	94	72.5	4	...	Cum.	Cum.
4.	...	...	...	0	...	...	...	...	...	...	...	...	
6.	wbN.	1	be	0	30.217	75.3	74.0	93	72.4	4	...	Cum.	Cum.
8.	E.S.E.	1	be	0	30.232	74.0	74.0	100	72.5	5	...	Cum.	
10.	swbs.	1	oe	0	30.229	74.8	74.0	95	...	6	...	Cum.	Cum.
Midd.	swbs.	1	oe	0	30.220	73.8	73.8	100	...	7	...	Cum.	
Totals.	...	12	belm	0	2131	42.7	34.5	51	19.7	51	Cir. cum. & Str.	Cum.	
Mean.	Variable.	1		0	30.213	74.3	73.4	95	72.2	5			

## FRIDAY, 30TH MAY 1873.

Hour.	Wind		Weather	State of Sea, 0 to 9.	Barometer re- duced to 32 and Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w.	1	e	0	30.209	73.8	73.8	100	...	8	...	Cum str.	At noon, lat. 32° 10' S, long. 65° 8' W. Temperature by self-registering thermo- meter, max. 80, min. 72°.
4.	s.w.	1	be	0	30.201	73.8	73.8	100	...	7	...	Cum str.	
6.	s.w.s.	2	be	0	30.214	73.8	73.8	100	72.2	6	...	Cum str.	
8.	s.w.s.	1	be	0	30.223	73.8	74.0	93	72.5	6	Cir.	Cum str.	
10.	s.s.w.	2	be	0	30.238	73.8	74.0	95	72.8	4	...	Cum str.	
Noon.	s.w.s.	2	be	0	30.234	74.0	74.5	92	73	4	...	Cum.	
2.	s.w.s.	3	be	0	30.197	73.8	74.3	91	73.5	4	Cir.	...	
4.	s.w.s.	2	be	0	30.201	73.8	74.8	91	73.0	3	...	Cum.	
6.	s.w.s.	2	be	0	30.204	73.8	74.8	89	73.0	2	Str.	Cum.	
8.	s.w.s.	1	be	0	30.218	73.3	73.3	94	73.5	3	Str.	Cum.	
10.	s.w.s.	2	be	0	30.227	73.8	72.8	94	73.5	4	Str.	Cum.	
Midt.	s.s.w.	1	be	0	30.215	73.5	72.8	96	73.0	2	...	Cum.	
Totals.		20		0	2581	59.5	48.7	58	30.0	53	Cir str.	Cum. & Cum str.	
Mean.	s.s.w.	2		0	30.215	75.0	74.1	95	73.0	4			

## SATURDAY, 31st.

2.	s.w.	1	be	...	30.165	72.8	72.3	97	73	3	Cir cum.	...	At Bermuda. Temperature by self-registering thermo- meter, max. 78°, min. 72.5°.
4.	s.w.	2	be	...	30.165	72.8	71.8	94	73	3	Cir cum.	...	
6.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	s.w.	2	be	...	30.207	75.8	74.3	92	...	2	Cir.	Cum.	
10.	s.w.	2	be	...	30.211	74.3	72.8	91	...	4	Cir.	Cum.	At noon entered the Narrows, and at 3 p.m. lashed the ship to dockyard wall.
Noon.	s.w.s.	2	be	...	30.189	73.3	73.8	87	...	4	Cir.	Cum.&Str.	
2.	w.s.w.	2	be	...	30.192	73.8	74.3	86	...	6	...	Cum.	
4.	w.s.w.	1	be	...	30.185	77.0	74.5	87	...	3	...	Cum.	
6.	w.s.w.	2	be	...	30.179	77.8	74.8	84	...	3	Cir cum.	...	
8.	Calm.	0	be	...	30.204	74.3	73.0	93	...	4	...	...	9.30 P.M., heavy rain squall.
Midt.	Calm.	0	be	...	30.213	73.8	72.8	94	...	3	...	Cum.&Str.	
Totals.		14		...	1910	51.7	34.4	5	...	35	Cir. & Cir cum.	Cum. & Str.	
Mean.	s.w.	1		...	30.191	75.2	73.4	90	73	3			

## SUNDAY, 1st JUNE.

2.	Calm.	0	be	...	30.199	72.8	71.8	94	...	4	...	Cum str.	At Bermuda. Temperature by self-registering thermo- meter, max. 78° 5, min. 71° 5.
4.	Calm.	0	be	...	30.206	72.8	71.0	90	...	5	...	Cum str.	
6.	s.w.b.	1	be	...	30.206	73.3	71.8	91	...	6	...	Cum.	
8.	s.w.b.	1	be	...	30.187	75.8	74.8	94	...	6	...	Cum.	
10.	s.w.b.	1	be	...	30.179	76.3	76.3	100	...	6	...	Cum.	
Noon.	s.w.b.	1	be	...	30.182	75.8	75.8	100	...	...	...	Cum.	
2.	s.w.b.	2	be	...	30.174	75.8	74.8	94	...	7	...	Cum.	
4.	s.w.b.	3	ocp	...	30.177	74.8	73.8	94	...	10	...	Cum.	
6.	s.w.b.	4	ocp	...	30.179	72.8	71.8	94	...	10	...	Nimb.	
8.	s.w.b.	2	ocp	...	30.155	72.8	72.3	97	...	7	...	Cum.	
10.	s.w.b.	3	e	...	...	70.8	69.8	94	...	9	...	Cum str.	
Midt.	s.w.s.	2	oc	...	30.182	69.8	68.8	94	...	10	...	Cum str.	
Totals.		20		...	2026	43.6	32.8	56	...	80	...	Cum. & Cum str.	
Mean.	West.	2		...	30.184	73.6	72.7	95	...	7	...		

MONDAY, 2d JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
2.	xw <sup>b</sup> s.	3	bc	...	30.185	68.8	66.8	88	...	8	...	Cum.		At Bermuda. Temperature by self-registering thermo- meter, max. 73°.5, min. 68°.5.
4.	s.s.w.	12	bc	...	30.185	68.8	67.3	91	...	6	...	Cum.		
6.	s.s.w.	1	bc	...	30.187	69.0	64.8	77	...	3	...	Cum.		
8.	sbw.	1	bc	...	30.221	69.8	65.8	78	...	3	...	Cum.		
10.	sbw.	1	...	...	30.221	72.0	65.8	68	...	...	...	...		
Noon.	xw <sup>b</sup> s.	12	bc	...	30.235	72.8	65.8	66	...	12	...	Cum.		
2.	xw <sup>b</sup> s.	1	bc	...	30.229	71.8	69.8	89	...	...	...	Cum.		
4.	xw <sup>b</sup> s.	1	bc	...	30.214	71.8	69.8	89	...	...	...	...		
6.	xw <sup>b</sup> s.	1	...	...	30.205	72.8	67.8	74	...	...	...	...		
8.	xw <sup>b</sup> s.	12	...	...	30.190	69.8	66.8	83	...	...	...	Cum.		
10.	s.w.	12	bc	...	30.200	69.8	65.8	78	...	4	...	Cum.		
Midlt.	s.w.	3	bc	...	30.202	69.8	64.8	73	...	7	...	Cum.		
Totals.	...	20	bc	...	247.4	7.0	81.1	95.4	...	33	...	...	Cum.	
Mean.	xw <sup>b</sup> s.	2		...	30.206	70.6	66.8	79	...	5	...	...	...	

TUESDAY, 3d.

2.	sw <sup>b</sup> s.	4	bc	...	30.163	67.8	63.8	78	...	6	...	Cum.		At Bermuda. Temperature by self-registering thermo- meter, max. 74°, min. 67°.2.
4.	sw <sup>b</sup> s.	5	bc	...	30.162	66.8	63.3	81	...	5	...	Cum.		
6.	sw <sup>b</sup> s.	4	bc	...	30.177	69.3	64.3	73	...	3	...	Cum.		
8.	sw <sup>b</sup> s.	3	bc	...	30.166	70.0	65.8	77	...	4	...	Cum str.		
10.	sw <sup>b</sup> w.	4	bc	...	30.167	70.8	66.8	78	...	5	...	Str.		
Noon.	sw <sup>b</sup> s.	3	bcq	...	30.165	71.8	65.3	67	...	5	...	Cir.		
2.	s.	2	bc	...	30.156	73.0	65.3	63	...	4	...	Cum.		
4.	s.	1	bc	...	30.147	72.8	64.8	62	...	2	...	Cum.		
6.	s.s.w.	1	bc	...	30.154	71.3	64.8	67	...	1	...	Cir str.		
8.	sbw.	1	bc	...	30.150	68.8	62.8	68	...	2	...	Cum.		
10.	s.s.w.	1	bc	...	30.160	68.8	62.8	68	...	1	...	Cir.		
Midlt.	Calm.	0	bc	...	30.164	68.8	62.8	68	...	1	...	Cir.		
Totals.	...	29	bc	...	1931	0.0	52.6	85.0	...	39	...	Cir str.	Cum.	
Mean.	s.s.w.	2		...	30.161	70.0	64.4	71	...	3	...	...	...	

WEDNESDAY, 4th.

2.	Calm.	0	bc	...	30.143	66.8	63.8	83	...	2	...	Cir.	...	At Bermuda. Temperature by self-registering thermo- meter, max. 76°, min. 66°.
4.	Calm.	0	bc	...	30.148	66.3	63.8	86	...	1	...	Cir.	...	
6.	xw <sup>b</sup> w.	1	bc	...	30.158	67.8	64.3	89	...	2	...	Cir.	Cum.	
8.	sw <sup>b</sup> s.	1	bc	...	30.143	69.8	64.8	73	...	4	...	Cum.		
10.	w <sup>b</sup> s.	1	bc	...	30.156	72.3	66.8	72	...	8	...	Cum.		
Noon.	w <sup>b</sup> s.	2	bc	...	30.144	73.8	67.8	70	...	6	...	Cum.		
2.	w <sup>b</sup> s.	2	bc	...	30.133	73.8	67.8	70	...	4	...	Cum.		
4.	xw <sup>b</sup> w.	3	bc	...	30.099	73.8	71.8	89	...	5	...	Cum.		
6.	xw <sup>b</sup> w.	4	bc	...	30.112	73.8	68.8	74	...	6	...	Cum.		
8.	w <sup>b</sup> s.	1	bc	...	30.105	70.8	66.8	78	...	2	...	Cum.		
10.	w <sup>b</sup> s.	2	bc	...	30.103	70.8	65.8	73	...	3	...	Cum.		
Midlt.	w <sup>b</sup> s.	1	bc	...	30.101	70.8	65.8	73	...	3	...	Cum.		
Totals.	...	18	bc	...	1545	10.6	78.1	921	...	46	...	Cir.	Cum.	
Mean.	w <sup>b</sup> s.	1		...	30.129	70.9	66.5	77	...	4	...	...	...	

## THURSDAY, 5TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 0 and Sea Level.	Thermometer.			Humidity. Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w.s.	3	bcq	...	30.088	69.3	66.8	86	...	5	...	...	Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 79° 5, min. 69° 0.
4.	w.s.	3	bcq	...	30.088	70.8	66.8	78	...	5	...	...	Cum.	
6.	w.s.w.	3	bc	...	30.096	70.3	66.3	78	...	3	...	...	Cum.	
8.	s.w.	3	bc	...	30.088	71.8	66.8	74	...	3	...	...	Cum.	
10.	s.w.s.	4	bc	...	30.089	74.8	71.8	84	...	3	...	...	Cum.	
Noon.	s.w.s.	3	bc	...	30.094	75.8	72.8	84	...	3	...	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	...	
6.	s.w.s.	3	bc	...	30.046	76.5	72.0	77	...	4	Cir str.	...	Cum.	
8.	s.w.s.	2	bc	...	30.019	74.8	73.8	94	...	3	...	...	Cum.	
10.	s.w.s.	4	bc	...	30.039	73.8	72.8	94	...	4	...	...	Cum.	
Midt.	s.w.s.	2	bc	...	30.044	73.8	72.8	94	...	5	Cir.	...	Cum.	
Totals.	...	30		...	691	31.7	2.7	843	...	38				
			bc									Cir str.	Cum.	
Mean.	s.w.	3		...	30.069	73.2	70.3	84	...	4				

## FRIDAY, 6TH.

2.	s.w.s.	3	bcq	...	30.034	73.8	72.8	94	...	6	...	Cum str.	At Bermuda. Temperature by self-registering thermo- meter, max. 80°, min. 73°.
4.	s.w.s.	4	bcq	...	30.028	73.8	71.8	89	...	8	...	Cum str.	
6.	s.w.s.	5	eq	...	30.024	74.3	73.3	94	...	9	...	Cum str.	
8.	s.w.s.	4	eq	...	30.038	74.8	73.8	94	...	10	...	Cum str.	
10.	s.w.s.	5	bc	...	30.021	77.8	75.8	89	...	7	Cir.	Cum str.	
Noon.	s.w.s.	4	bc	...	30.021	78.8	77.8	95	...	8	Cir.	Cum str.	
2.	s.w.s.	5	...	...	30.012	77.8	76.8	94	...	...	...	Cum str.	
4.	s.w.s.	4	bcqr	...	30.002	77.8	75.8	89	...	7	...	Cum str.	
6.	s.w.s.	6	bcqr	...	30.009	76.6	75.5	94	...	7	...	Cum.	
8.	s.w.s.	3	...	...	30.006	75.8	74.3	91	...	...	...	...	
10.	s.w.s.	2	bcq	...	29.971	74.8	74.8	100	...	7	...	Cum.	
Midt.	s.w.s.	3	bcq	...	30.045	74.8	73.8	94	...	8	...	Cum.	
Totals.	...	48		...	211	70.9	56.3	1117	...	77			
			bcqr									Cir.	Cum str.
Mean.	s.w.s.	4		...	30.018	75.9	74.7	93	...	8			

## SATURDAY, 7TH.

2.	s.w.s.	5	oq	...	29.997	74.8	73.8	94	...	10	...	Nimb.	At Bermuda. Temperature by self-registering thermo- meter, max. 78°, min. 71° 2.	
4.	s.w.s.	4	oq	...	29.987	74.8	73.8	94	...	10	...	Nimb.		
6.	s.w.s.	4	oqr	...	29.988	74.8	74.5	99	...	10	...	Cum.		
8.	s.w.s.	3	oqrt	...	30.008	72.3	71.8	97	...	10	...	Cum.		
10.	s.w.s.	5	oqrp	...	30.019	73.8	73.3	97	...	10	...	Cum.		
Noon.	s.w.s.	4	bca	...	30.011	76.3	75.8	97	...	9	...	Cum.		
2.	s.w.s.	3	bca	...	29.981	76.8	76.8	100	...	8	...	Cum.		
4.	s.w.s.	2	bc	...	29.972	76.8	76.3	97	...	9	...	Cum.		
6.	s.w.s.	4	bc	...	29.978	75.8	75.8	100	...	8	...	Cum.		
8.	s.w.s.	3	cp	...	29.979	75.0	74.3	96	...	10	...	Cum.		
10.	s.w.s.	4	bc	...	29.970	74.3	73.8	97	...	7	...	Cum.		
Midt.	s.w.s.	3	bc	...	29.962	74.3	73.8	97	...	7	...	Cum.		
Totals.				...	44	...	11843	59.8	53.8	85	...	108	...	Cum. & Nimb.
Mean.				s.w.s.	4	...	29.987	75.0	74.5	97	...	9	...	

SUNDAY, 8TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea-Surface.	Clouds, 0 to 100.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbs.	3	c	...	29.949	73.8	73.8	100	...	10	...	Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 77°, min. 70° 7.
4.	swbs.	4	c	...	29.879	73.8	73.8	100	...	10	...	Cum.	
6.	swbw.	5	eq	...	29.887	73.8	73.8	100	...	8	Cir.	Cum.	
8.	swbw.	4	eqpt	...	29.909	74.3	73.8	97	...	9	...	Cir. & Nb.	
10.	wbs.	3	eqpt	...	29.890	72.8	72.3	97	...	9	...	Cir. & Nb.	
Noon.	wbs.	2	bc	...	29.899	73.3	72.3	94	...	7	...	Cir. st. & Nb.	
2.	wbs.	2	bc	...	29.892	73.3	72.8	97	...	6	Str.	Cum.	
4.	swbw.	3	bc	...	29.885	72.8	71.8	94	...	6	Str.	Cum.	
6.	swbw.	2	bc	...	29.889	71.8	68.8	84	...	9	Str.	Cum.	
8.	swbw.	1	cp	...	29.882	70.8	69.8	94	...	9	Str.	Cum.	
10.	swbw.	1	cp	...	29.890	69.3	66.8	86	...	10	...	Cum.	
Midd.	NEbS.	1	cp	...	29.944	68.0	66.8	93	...	10	...	Cum.	
Totals.	...	31	eqpt	...	10795	27.8	16.6	1136	...	103	Str.	Cum. & Nimb. 1	
Mean.	wbN.	3	...	...	29.890	72.3	71.4	95	...	9	...	...	

MONDAY, 9TH.

2.	Vble.	0	c	...	29.935	67.8	66.8	94	...	10	...	Cum.	At Bermuda. Temperature by self-registering thermo- meter, 73° 7, min. 65° 8. 6 A.M., clear to north-westward.
4.	swbs.	1	cp	...	29.917	67.8	66.8	94	...	10	...	Cum.	
6.	swbs.	1	bcp	...	29.943	66.8	65.8	94	...	9	...	Cum str.	
8.	swbs.	1	bcp	...	29.975	66.8	66.0	95	...	8	Str.	Cum.	
10.	wbs.	2	bc	...	29.990	71.8	68.8	84	...	8	Cir.	Cum str.	
Noon.	swbs.	2	bc	...	29.990	71.8	68.8	84	...	8	Cir.	Cum str.	
2.	swbw.	1	bc	...	30.006	72.3	68.8	82	...	6	Str.	Cum str.	
4.	swbw.	2	bc	...	30.002	72.0	68.8	83	...	6	Str.	Cum.	
6.	swbs.	2	bc	...	29.997	72.0	71.8	94	...	6	...	Cum.	
8.	swbs.	1	bc	...	30.037	70.8	69.8	94	...	7	...	Cum.	
10.	Calu.	0	bc	...	30.077	69.8	67.8	88	...	6	...	Cum.	
Midd.	wbs.	1	bc	...	30.080	68.8	66.8	88	...	7	...	Cum.	
Totals.	...	14	bcp	...	11949	119.3	96.8	114	...	90	Cir str.	Cum str.	
Mean.	swbs.	1	...	...	29.996	69.9	68.1	89	...	7	...	...	

TUESDAY, 10TH.

2.	swbw.	1	bc	...	30.080	68.8	67.8	94	...	8	...	Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 75° 5, min. 67° 5.
4.	swbw.	2	bc	...	30.089	68.8	67.8	94	...	7	...	Cum.	
6.	N. N. W.	1	bc	...	30.126	67.8	67.8	100	...	5	Cir.	Cum.	
8.	N. N. W.	2	bc	...	30.168	70.8	69.3	91	...	2	Cir.	Cum.	
10.	N. N. W.	3	bc	...	30.185	71.8	68.8	84	...	5	Cir.	Cum.	
Noon.	NbE.	2	bc	...	30.211	73.2	67.8	72	...	3	Cir.	Cum.	
2.	N.	1	bc	...	30.212	74.8	68.3	68	...	2	...	Cum.	
4.	swbw.	2	bc	...	30.219	73.8	67.8	70	...	2	Cir cum.	...	
6.	swbw.	1	bc	...	30.220	73.8	67.8	70	...	2	Or cum.	...	
8.	swbw.	1	...	...	30.235	71.3	66.8	76	...	...	...	...	
10.	swbw.	1	...	...	30.276	70.3	65.8	76	...	2	Cir cum.	...	
Midd.	N. N. W.	2	bc	...	30.256	69.8	65.8	78	...	4	...	Cum.	
Totals.	...	19	bc	...	2277	15.0	91.6	973	...	42	Cir cum.	Cum.	
Mean.	swbw.	2	...	...	30.189	71.3	67.6	81	...	4	...	...	

## WEDNESDAY, 11th JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	1	bc	...	30.268	68.8	65.8	83	...	5	...	Cum.	At Bermuda. Temperature by self-registering thermo- meter, max. 75°, min. 68° 7'.
4.	N.E.	1	...	...	30.268	68.8	65.8	83	...	...	...	Cum.	
6.	N.N.E.	1	bc	...	30.302	69.8	65.8	78	...	5	Cir str.	Cum.	
8.	N.N.E.	1	bc	...	30.322	71.8	66.3	71	...	4	Cir str.	Cum.	
10.	N.N.E.	2	bc	...	30.326	73.8	73.3	97	...	3	Cir.	...	
Noon.	N.N.E.	1	bc	...	30.327	73.8	73.3	97	...	3	Cir.	...	
2.	N.W.S.	1	bc	...	30.330	73.8	70.8	84	...	2	...	Cum.	
4.	N.E.S.	1	bc	...	30.315	73.8	70.8	84	...	3	...	Cum.	
6.	E.S.	1	bc	...	30.286	74.3	70.8	82	...	3	Cir.	Cum.	
8.	Calm.	0	bc	...	30.298	71.3	68.3	83	...	5	...	Cum.	
10.	Calm.	0	bc	...	30.296	71.3	67.8	81	...	3	Cir.	...	
Midt.	S.E.	1	bc	...	30.304	70.8	67.8	83	...	3	Cir.	...	
Totals.	...	11	bc	...	3642	22.1	106.6	46	...	39	Cir str.	Cum.	
Mean.	N.E.S.	1	...	...	30.303	71.8	68.9	84	...	4	...	...	

## THURSDAY, 12th.

2.	S.E.	1	bc	...	30.286	69.8	66.8	83	...	...	3	Cir.	...	At Bermuda. Temperature by self-registering thermo- meter, max. 77°, min. 68° 5'.
4.	S.E.	1	...	...	30.296	69.8	66.8	83	...	...	...	Cir.	...	
6.	N.E.N.	0	bc	...	30.290	70.3	66.8	81	...	...	4	...	Cum.	
8.	N.E.N.	1	bc	...	30.287	71.8	67.3	76	...	...	2	...	Cum.	
10.	N.E.N.	0	bc	...	30.287	74.8	69.8	74	...	...	2	...	Cum.	
Noon.	S.E.	1	bc	...	30.262	76.0	70.8	74	...	...	4	Cir cum.	...	
2.	S.E.	2	bc	...	30.260	75.3	70.3	74	...	...	2	Cir str.	...	
4.	S.E.	2	...	...	30.231	75.8	70.3	73	...	...	...	...	...	
6.	S.E.	3	bc	...	30.203	74.8	70.8	79	...	...	5	Cir.	Cum.	
8.	S.E.	2	bc	...	30.229	73.8	70.8	84	...	...	7	Cir.	Cum.	
10.	W.S.	2	bc	...	30.239	73.8	70.8	84	...	...	6	Cir.	Cum.	
Midt.	W.S.	1	bc	...	30.232	73.8	70.8	84	...	...	5	Cir.	Cum.	
Totals.	...	16	bc	...	3102	39.8	112.1	109	...	...	40	Cir.	Cum.	
Mean.	S.E.	1	...	...	30.258	73.3	69.3	79	...	...	4	...	...	

## FRIDAY, 13th.

2.	Vble.	1	bc	...	30.219	72.8	71.8	94	...	...	3	Cir str.	...	At noon, lat. 32° 26' S. long. 64° 35' W. Temperature by self-registering thermo- meter, max. 77° 2', min. 71° 5'. 6 A.M., left Bermuda for the Azores and Madeira.
4.	Calm.	0	bc	...	30.195	72.3	70.8	91	...	...	2	Cir str.	...	
6.	Calm.	0	bc	...	30.167	77.0	72.8	78	...	...	4	...	Str. cum.	
8.	N.E.	1	bc	0	30.171	75.3	72.3	84	...	...	4	...	Str. cum.	
10.	E.S.E.	1	bc	0	30.197	75.8	72.8	84	...	...	3	...	Cum.	
Noon.	E.S.E.	1	bc	0	30.207	75.8	72.8	84	...	...	4	Cir.	Cum.	
2.	S.E.	2	bc	0	30.189	76.3	72.8	82	75	...	6	Cir.	Cum.	
4.	S.E.	2	bc	0	30.158	76.3	71.3	75	...	...	7	Str.	Cum.	
6.	W.S.W.	1	bc	0	30.167	75.3	71.3	79	73.5	...	8	Str.	Cum.	
8.	W.S.W.	1	bc	0	30.163	75.0	71.5	82	73.5	...	8	Str.	Cum.	
10.	S.W.	1	bc	0	30.167	74.8	71.8	84	73.5	...	8	Cir.	Cum.	
Midt.	Vble.	1	bc	0	30.191	74.8	72.3	86	73.5	...	7	Cir.	Cum.	
Totals.	...	12	bc	0	2191	61.5	24.3	1003	19.0	...	64	Cir str.	Cum.	
Mean.	S.S.E.	1	...	...	30.183	75.1	72.0	84	73.8	...	5	...	...	

## SATURDAY, 14TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- solved to 30° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.S.E.	1	bc	1	30.172	73.8	71.8	89	73.5	7	Cir.	Cum.	At noon, lat. 32° 52' N. long. 63° 34' W. Temperature by self-registering thermo- meter, max. 77° 5, min. 73° 2. Current, N. 38° E. 19'. Sky red and watery at sunrise. Sp. gr. 1.02726.
4.	S.E.S.	1	bc	1	30.180	73.8	72.3	91	73.0	9	...	Cum.	
6.	S.S.E.	1	...	...	30.169	74.3	73.5	95	...	8	Cir cum.	Nb. to E.	
8.	S.S.E.	1	bc	1	30.179	74.3	73.8	97	72.8	7	Cir.	Cum str.	
10.	S.S.E.	1	bc	1	30.190	76.3	75.3	94	73.8	6	Cir str.	Cum str.	Heavy dew.
Noon.	S.E.	3	bc	1	30.215	75.8	74.8	94	74.0	6	Cir str.	Cum str.	
2.	S.S.E.	2	bc	...	30.214	76.8	75.8	94	74.0	7	Cir str.	...	
4.	...	...	...	...	...	...	...	...	74.0	...	...	...	
6.	S.E.	3	bc	1	30.206	76.3	75.3	94	74.0	9	Str. cum.	Str. cum.	Heavy dew.
8.	S.S.E.	3	bc	1	30.211	75.3	74.8	97	73.2	3	Str. cum.	Str. cum.	
10.	S.S.E.	3	bc	1	30.226	74.8	74.3	97	73.0	7	Str. cum.	Str. cum.	
Midt.	S.S.E.	3	bew	2	30.229	73.8	73.8	100	73.0	6	...	Cum.	
Totals.	...	25	bew	10	2191	55.3	45.5	52	38.3	75	Cir str.	Str. & Cum.	
Mean.	S.S.E.	2		1	30.199	75.0	74.1	95	73.5	7			

## SUNDAY, 15TH.

2.	S.E.	3	bew	1	30.228	74.3	74.3	100	73	6	Cir str.	...	At noon, lat. 33° 41' N. long. 61° 28' W. Temperature by self-registering thermo- meter, max. 76½, min. 73. Current, N. 19° E. 16'. 2 A.M., small ring round the moon. Heavy dew. 4 A.M., light scud passing over rapidly from S.W.
4.	S.E.	4	bew	...	30.248	74.3	74.3	100	73.5	9	Cir str.	Str.	
6.	S.E.	3	bc	...	30.282	73.8	73.3	97	72.5	9	Str.	Cum.	
8.	S.E.E.	4	bc	1	30.292	73.8	73.5	98	73	9	Str.	Cum.	
10.	S.E.E.	3	bc	...	30.296	75.8	74.8	94	73.5	6	Cir.	Cum.	Midnight, heavy dew.
Noon.	S.E.E.	3	bc	...	30.299	75.3	74.3	94	73	4	Cir.	Cum.	
2.	S.E.E.	4	bc	...	30.308	75.0	74.0	94	73	6	Cir str.	Cum.	
4.	S.E.E.	3	bc	...	30.306	74.8	73.8	94	73	8	Str.	Cum.	
6.	S.E.E.	4	bc	...	30.320	74.3	73.8	97	73	8	Cir str.	...	Midnight, heavy dew.
8.	S.E.E.	4	bc	...	30.330	72.8	72.3	97	72.5	9	Str.	Cum.	
10.	S.E.E.	3	bc	...	30.325	73.3	71.8	91	71	6	Str.	Cum.	
Midt.	S.E.E.	3	bew	...	30.324	71.8	71.8	100	71	5	Str.	Cum.	
Totals.	...	44	bew	2	3558	49.3	42.0	76	32.0	85	Cir str.	Cum.	
Mean.	S.E.	3		1	30.296	74.1	73.5	96	72.7	7			

## MONDAY, 16TH.

2.	S.E.E.	3	bc	1	30.282	70.8	70.8	100	71	4	Cir cum.	...	At noon, lat. 34° 27' N. long. 58° 56' W. Temperature by self-registering thermo- meter, max. 77°, min. 71'. Current, N. 33° E. 12'. Slight swell. Sp. gr. 1.02715.
4.	S.E.E.	4	bc	1	30.282	71.3	71.3	100	71	2	...	Str. cum.	
6.	S.W.	4	bc	...	30.306	71.8	71.0	95	71	2	Cir str.	Cum.	
8.	S.W.	5	bc	1	30.306	...	...	...	71	2	...	Cum.	
10.	S.E.E.	3	bc	1	30.297	73.3	72.3	97	71	3	Str.	Cum.	Slight swell.
Noon.	S.E.	4	bc	1	30.287	75.3	75.0	99	71.5	2	Str.	Cum.	
2.	S.E.	4	bc	1	30.289	75.3	74.8	97	71	2	Cir str.	...	
4.	S.E.	4	bc	...	30.268	74.8	72.8	89	71	2	Str.	Cum.	
6.	S.W.W.	4	bc	...	30.234	73.3	72.5	96	71.5	2	Cir.	Cum.	Slight swell.
8.	S.W.	1	bc	...	30.232	72.8	71.8	94	...	4	...	Str.	
10.	S.W.	4	bc	2	30.237	72.5	71.8	95	71.5	5	...	Str. cum.	
Midt.	S.W.	4	bc	2	30.224	72.3	71.8	97	71.5	5	...	Cum.	
Totals.	...	47	bc	10	3244	33.5	25.9	69	13	35	Cir str.	Cum.	
Mean.	Southly.	4		1	30.270	73.0	72.4	96	71.2	3			

## TUESDAY, 17TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer reduced to Sea Level	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.	4	bey	...	30.184	72.3	70.8	91	71.5	5	Str.	Cum.	At noon, lat. 34° 54' S. long. 56° 38' W. Temperature by self-registering thermo- meter, max. 76° 5, min. 71° 2. Current, S. 13° W. 7.
4.	s.	5	be	...	30.170	71.8	70.8	94	71.5	5	Cir.	Cum.	
6.	s.	5	be	...	30.151	71.8	70.8	94	71.5	6	...	Cum.	
8.	s.	6	be	...	30.136	73.8	72.8	94	71.5	6	...	Cum.	
10.	swb.s.	6	be	...	30.113	75.3	73.8	91	71	4	Cir.	Cir cum.	Sp. gr. 1.02713.
Noon.	swb.w.	6	be	...	30.065	76.0	73.8	88	70.8	4	Cir.	Cir cum.	
2.	swb.w.	6	be	4	30.057	75.3	73.5	91	71	8	...	Cum.	Some rain showers in the early part of the first watch.
4.	swb.w.	5	be	4	30.052	74.6	73.2	92	71	6	...	Cum.	
6.	w.s.w.	6	be	4	30.059	72.8	71.8	94	71	6	...	Cum.	
8.	s.s.w.	6	be	4	30.033	73.0	72.3	96	71.5	7	Str.	Cum.	
10.	sb.w.	5	bep	4	30.029	72.8	71.8	94	71.5	9	...	Nimb.	
Midt.	sb.w.	6	be	4	30.000	72.8	71.8	94	71.5	9	...	Nimb.	
Totals.	...	66	bey	24	1049	42.3	27.2	33	3.3	75	Cir str.	Cum. & Nimb.	
Mean.	s.s.w.	5		4	30.088	73.5	72.3	93	71.3	6			

## WEDNESDAY, 18TH.

2.	sb.w.	6	be	4	29.965	72.3	71.8	97	71.5	4	...	Cum.	At noon, lat. 35° 6' S. long. 52° 50' W. Temperature by self-registering thermo- meter, max. 76°, min. 70°. Current, S. 27° E. 9.
4.	sb.w.	7	bey	4	29.962	72.3	71.8	97	71.0	6	...	Cum.	
6.	swb.s.	7	ep	4	29.964	72.3	71.8	97	70.5	10	...	Cum.	
8.	s.w.	7	ep	4	29.950	72.3	71.3	94	70.5	10	...	Cum.	
10.	swb.w.	5	bep	4	29.958	72.3	71.8	97	70.0	8	...	Cum.	Sp. gr. 1.02722.
Noon.	s.w.	7	bep	4	29.943	70.8	70.3	97	70.0	7	...	Cum.	
2.	w.s.w.	7	bey	4	29.933	73.8	71.8	89	70.0	8	Cir str.	Cum.	Lightning to south-eastward.
4.	...	...	...	...	...	...	...	...	70.0	...	...	Cum.	
6.	swb.w.	5	bey	4	29.912	74.8	73.3	91	70.5	3	Str.	Cum.	
8.	w.s.w.	4	be	4	29.912	71.5	70.8	96	70.5	4	...	Cum.	
10.	w.s.w.	5	bel	4	29.930	71.3	70.8	97	71.0	3	...	Cum.	
Midt.	wb.s.	6	bel	4	29.920	70.8	70.8	100	71.0	4	...	Cum.	
Totals.	...	66	bey	40	10349	24.5	16.3	62	6.5	67	Cir str.	Cum.	
Mean.	s.w.	6		4	29.941	72.2	71.5	96	70.5	6			

## THURSDAY, 19TH.

2.	wb.s.	5	be	4	29.885	70.8	70.8	100	71	9	...	Cm. & Nb.	At noon, lat. 35° 29' S. long. 50° 53' W. Temperature by self-registering thermo- meter, max. 74° 5, min. 66° 8. Current, S. 39° E. 3. 3.30 A.M., wind shifted in a sharp shower.
4.	wb.s.	3	bep	4	29.915	70.8	70.8	100	71	9	...	Cm. & Nb.	
6.	wb.s.	1	be	2	29.930	68.3	67.5	96	71	4	Cir.	Cum.	
8.	wb.s.	1	be	2	29.979	69.0	68.0	94	71	3	Cir.	Cum.	
10.	wb.s.	1	be	1	29.955	71.0	68.5	86	71	3	Cir.	Cum.	Sp. gr. 1.02726.
Noon.	wb.s.	1	be	1	30.009	70.8	69.8	94	71	3	Cir.	Cum.	
2.	w.s.w.	1	be	1	30.001	73.8	70.8	84	71	5	...	Cum.	
4.	w.s.w.	2	be	1	29.998	73.8	70.8	84	71	4	...	Cum.	
6.	w.	1	be	1	30.018	71.8	68.3	82	71.2	1	Cir.	Cum.	
8.	w.s.	2	be	1	30.044	69.8	67.8	88	71.2	4	...	Cum.	
10.	wb.s.	2	be	1	30.026	68.8	66.3	86	70.7	2	Cir.	Str.	
Midt.	wb.s.	1	b	1	30.048	68.8	66.3	86	70.5	2	Cir.	Str.	
Totals.	...	21	bep	20	11808	7.5	105.7	1080	11.6	49	Cir.	Cum str. & Nimb.	
Mean.	w.	2		2	29.984	70.6	68.8	90	70.9	4			

FRIDAY, 20TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.b.s.	1	bcl	1	30.002	68.8	65.8	83	70	3	...	Cum str.	At noon, lat. 35° 35' N. long. 50° 27' W. Temperature by self-registering thermometer, max. 76°, min. 67° 5. Current, N. 76° E. 17'. Lightning to southward.
4.	Calm.	0	bc	0	29.993	67.8	66.3	91	70	3	...	Cum str.	
6.	Calm.	0	bc	1	30.030	68.8	66.3	86	70	12	Cir.	Str.	
8.	Vble.	1	bc	0	30.032	69.8	66.3	80	70.5	6	...	Str. cum.	
10.	sw $\frac{1}{2}$ w.	1	bc	1	30.041	72.0	69.5	87	70.5	3	...	Str. cum.	
Noon.	sw $\frac{1}{2}$ w.	1	bc	1	30.026	73.8	70.8	84	71.2	4	...	Str. cum.	
2.	Variable.	0	bc	0	30.049	75.3	72.3	84	75	3	...	Str. cum.	
4.	Calm.	0	bc	0	30.051	75.3	71.8	82	74.5	12	...	Cum.	
6.	sw $\frac{1}{2}$ w.	1	bc	0	30.038	74.0	71.3	86	75	4	...	Cum.	
8.	s.e.b.e.	1	bc	0	30.062	73.8	71.8	89	73	3	...	Cum.	
10.	s.e.b.e.	2	bc	1	30.081	72.5	72.0	97	72.5	4	...	Cum.	Fine sunset.
Midt.	s.e.b.e.	2	bc	1	30.081	72.5	72.5	100	72.2	12	...	Cum.	
Totals.	...	10	bcl	6	486	24.4	116.7	89	24.4	39	Cir.	Str. & Cum.	
Mean.	Vble.	1		0	30.041	72.0	69.7	87	72.0	3			

SATURDAY, 21ST.

2.	s.s.e.	2	bc	1	30.059	72.3	71.8	97	73	3	Cir.	Cum.	At noon, lat. 36° 22' N. long. 48° 37' W. Current, S. 19° E. 19'. Temperature by self-registering thermometer, max. 75°, min. 71° 5. Wind variable from 1.30 A.M. to 2.30. Sp. gr. 1.02727.
4.	s.b.e.	3	bc	1	30.083	72.3	71.3	94	73	3	Str.	Cum.	
6.	s.b.e.	2	bc	1	30.064	72.8	71.8	94	...	2	Cir str.	Cum.	
8.	s.b.e.	3	bc	1	30.064	72.8	72.3	97	73	4	...	Cum.	
10.	s.s.s.	3	bcp	1	30.082	73.8	72.8	94	73	4	Cir str.	...	
Noon.	s.s.e.	4	bc	1	30.079	74.8	73.8	94	72.5	5	Cir.	...	
2.	s.s.e.	4	bc	1	30.075	74.0	73.8	99	72.5	4	Cir.	...	
4.	s.s.e.	5	bc	2	30.051	74.5	72.3	88	72.5	5	Cir.	Cum.	
6.	s.b.s.	4	bc	1	30.056	74.5	72.3	88	72.5	4	Cir.	Cum.	
8.	s.e.	3	bc	2	30.081	73.0	72.5	97	73.0	7	...	Cum.	
10.	s.e.	5	bc	3	30.107	72.8	71.8	94	72.0	9	...	Nimb.	Midnight. Wind freshening.
Midt.	s.e.	5	c	3	30.099	71.8	71.8	100	71.0	10	...	Nimb.	
Totals.	...	43	bcp	18	900	39.4	28.3	56	28.0	60	Cir str.	Cum. & Nimb.	
Mean.	s.s.e.	4		2	30.075	73.3	72.4	95	72.5	5			

SUNDAY, 22D.

2.	s.b.e.	6	bc	3	30.129	72.0	71.8	99	69.7	5	...	Cum.	At noon, lat. 37° 19' N. long. 45° 6' W. Current, W. 6'. Temperature by self-registering thermometer, max. 75°, min. 70° 2. Sp. gr. 1.02716.
4.	s.b.e.	6	bcp	3	30.129	71.0	70.8	99	69.7	9	...	Cum.	
6.	s.e.	6	bcp	3	30.112	71.3	70.8	97	70.0	7	...	Cum.	
8.	s.b.e.	6	cqp	3	30.122	74.3	70.3	79	70.5	9	...	Cum.	
10.	s.b.e.	7	bcp	3	30.185	74.8	71.8	84	70.5	4	Cir str.	Cum.	
Noon.	s.b.e.	6	bc	3	30.200	72.8	71.8	94	70.5	5	Cir.	Cum str.	
2.	s.b.e.	6	bc	3	30.225	71.8	71.8	100	71.0	2	Cir.	Cir cum.	
4.	s.b.e.	6	bc	4	30.225	71.8	71.8	100	71.0	4	Str.	Cum.	
6.	s.s.e.	6	bc	3	30.285	72.3	71.5	95	70.7	3	Str.	Cum.	
8.	s.b.e.	6	bc	3	30.285	72.3	71.8	97	71.0	10	...	Cum.	
10.	s.b.e.	6	bc	3	30.264	70.8	70.3	97	69.7	6	...	Cum.	
Midt.	s.b.e.	5	bc	3	30.276	69.8	69.3	97	69.7	3	...	Cum.	
Totals.	...	72	bcp	37	2437	25.0	13.8	58	4.0	67	Cir str.	Cum.	
Mean.	s.b.e.	6		3	30.203	72.1	71.1	95	70.3	6			

## MONDAY, 23d JUNE 1873.

Hour	Wind.		Weather	State of Sea, 0 to 5.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.S.E.	6	bc	4	30.237	69.8	69.3	97	69.7	1	Cir cum.	...	At noon, lat. 37° 54' N. long. 41° 38' W. Temperature by self-registering thermo- meter, max. 76°, min. 69°.
4.	S.S.E.	6	bc	4	30.237	69.8	69.3	97	69.7	3	...	Str. cum.	
6.	S.S.E.	6	bc	3	30.239	69.8	68.8	94	70.0	4	...	Cum.	
8.	S.S.E.	6	bc	3	30.247	70.3	69.3	94	70.0	2	...	Cum.	
10.	S.S.E.	6	bc	3	30.273	72.3	70.0	88	69.7	1	Cir str.	...	Cir cum. working up from the S.W. Current, S. 43° W. 6'. Sp. gr. 1.02700.
Noon.	S.S.E.	5	bc	3	30.283	72.3	70.3	89	69.7	1	Str.	...	
2.	S.E.	4	bc	3	30.261	75.0	72.8	88	69.7	2	...	Cum.	
4.	S.E.	5	b	3	30.277	71.8	70.5	93	70.0	0	...	...	
6.	S.S.E.	6	b	4	30.224	70.8	69.8	94	70.0	0	...	...	Sea phosphorescent.
8.	S.E.	6	bc	3	30.247	70.0	69.3	95	69.2	2	...	Cum.	
10.	S.E.	5	bc	3	30.262	70.0	68.8	93	68.5	1	...	Str.	
Midd.	S.S.E.	6	bc	3	30.266	70.3	68.5	90	68.0	1	...	Str.	
Totals	...	67	bc	39	3063	12.2	116.7	32	114.2	18	Cir str.	Cum. & Str.	
Mean.	S.S.E.	6		3	30.255	71.0	69.7	93	69.5	1			

## TUESDAY, 24th.

2.	S.S.E.	5	bc	2	30.253	70.3	69.5	95	69.0	2	...	Str. cum.	At noon, lat. 38° 3' N. long. 39° 19' W. Temperature by self-registering thermo- meter, max. 74°, min. 69°.
4.	S.S.E.	4	bc	2	30.227	69.8	68.8	94	69.0	2	...	Str. cum.	
6.	S.E.	4	bc	2	30.264	69.8	67.8	88	69.5	2	Str.	Cum.	
8.	S.S.E.	4	bc	2	30.288	69.8	67.8	88	69.5	2	...	Str. cum.	
10.	S.S.E.	4	bc	3	30.284	73.3	70.8	87	71.0	3	...	Str. cum.	Current, S. 55° W. 15'. Swell from S.W. to S. Sp. gr. 1.02694.
Noon.	S.E.	5	bc	3	30.272	72.5	70.3	88	71.0	4	...	Str. cum.	
2.	S.E.	4	bc	3	30.244	72.3	69.8	87	71.2	3	Str.	Cum.	
4.	S.E.	3	bc	3	30.252	72.3	69.8	87	71.2	3	Str.	Cum.	
6.	S.E.	4	bc	2	30.259	71.8	68.8	84	71.5	4	Str.	Cum.	Cum. & Str.
8.	S.S.E.	4	bc	2	30.265	70.8	69.8	94	71.0	4	...	Cum. & Str.	
10.	S.S.E.	6	bc	2	30.265	70.8	69.0	90	71.0	8	...	Cum.	
Midd.	S.S.E.	5	bc	2	30.267	70.5	69.0	91	71.0	5	...	Cum.	
Totals	...	52	bc	28	3140	14.0	111.2	113	5.9	42	Str.	Str. & Cum.	
Mean.	S.S.E.	4		2	30.262	71.2	69.3	89	70.5	3			

## WEDNESDAY, 25th.

2.	S.S.E.	5	bc	2	30.248	70.8	68.8	88	71	5	Str.	Cum.	At noon, lat. 38° 23' N. long. 37° 21' S. Temperature by self-registering thermo- meter, max. 74°, min. 69°.
4.	S.S.E.	5	bc	1	30.251	70.8	68.8	88	70.5	4	Str.	Cum.	
6.	S.S.E.	4	bc	1	30.258	70.0	69.0	94	70	6	Cir.	Cum.	
8.	S.S.E.	4	bc	1	30.272	70.3	69.8	97	70	6	Cir.	Cum str.	
10.	S.E.	4	bc	2	30.268	71.8	71.8	94	71	5	Cir.	Cum str.	Current, S. 19° W. 27'. 2 to 3 A.M., squalls from southward. Sp. gr. 1.02718.
Noon.	S.E.	5	bc	2	30.277	72.8	72.8	100	71.5	5	Cir.	Cum str.	
2.	S.E.	3	bc	2	30.297	73.0	72.5	97	71	5	Cir.	...	
4.	S.E.	4	bc	2	30.249	73.0	71.5	91	70.8	5	Cir str.	...	
6.	S.E.	3	bc	2	30.228	71.8	70.3	91	71	5	...	Cum str.	Str.
8.	S.S.E.	4	bc	1	30.245	70.8	70.3	97	70.2	6	...	Str.	
10.	S.E.	4	bc	2	30.260	70.8	70.3	97	70.2	5	...	Cum str.	
Midd.	S.S.E.	4	bc	2	30.249	70.3	69.8	97	70.2	6	...	Str.	
Totals	...	49	bc	20	3102	16.2	5.7	51	7.4	63	Cir str.	Str. & Cum.	
Mean.	S.E.	4		2	30.258	71.3	70.5	94	70.6	5			

THURSDAY, 26TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 4.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.s.e.	4	bc	12	30.252	69.8	69.0	95	69.8	3	Cir str.	Cum.	At noon, lat. 38° 25' N. long. 35° 50' W. Temperature by self-registering thermo- meter, max. 74°, min. 69°. Current, N. 38° W. 4'.
4.	sbe.	4	bc	12	30.242	69.8	69.3	97	69.6	6	Str.	Cum.	
6.	s.	12	bc	1	30.252	69.8	69.3	97	70	6	Str.	Cum.	
8.	s.	12	bc	1	30.258	70.8	70.3	97	70	4	Cir str.	Cum.	
10.	s.	12	bc	1	30.259	71.5	71.0	96	70	5	Cir str.	Cum.	Sp. gr. 1.02714.
Noon.	sbw.	12	bc	1	30.249	73.3	72.3	94	70	7	Cir str.	Cum.	
2.	sbw.	12	...	...	...	...	...	...	...	...	...	...	
4.	s.s.w.	12	bc	1	...	72.3	71.8	97	...	9	Cir str.	...	
6.	sbw.	12	bc	1	30.244	71.8	70.8	94	71.0	8	...	Str. cum.	...
8.	sbw.	12	bc	1	30.247	71.8	70.8	94	71.0	6	...	Str. cum.	
10.	sbe.	12	bc	1	30.277	71.0	70.5	97	70.5	4	...	Str.	
Midt.	s.s.w.	1	bc	1	30.239	70.8	69.8	94	70.3	4	...	Cum.	
Totals.	...	20	bc	13	2519	12.7	4.9	62	2.2	62	Cir str.	Cum. & Str.	
Mean.	s.	2		1	30.252	71.1	70.4	96	70.2	6			

FRIDAY, 27TH.

2.	sbw.	12	...	...	30.237	69.8	69.8	100	70.2	...	...	Str.	At noon, lat. 38° 18' N. long. 34° 48' W. Temperature by self-registering thermo- meter, max. 76° 5, min. 69° 2. Current, S. 72°, E. 16'. Heavy dew.
4.	s.	12	...	...	30.237	69.8	69.8	100	69.2	...	...	Str.	
6.	s.s.w.	12	bc	1	30.256	70.3	69.3	94	69.2	1	Str.	Cum.	
8.	s.s.w.	1	bc	1	30.270	70.3	70.0	98	69.2	1	Cir.	Cum.	
10.	s.s.w.	2	bc	1	30.278	70.8	69.8	94	69.5	1	Cir.	...	Sp. gr. 1.02700.
Noon.	sbw.	1	bc	1	30.259	73.3	71.8	91	70.5	1	Str.	...	
2.	wbs.	12	b	1	30.269	73.3	71.8	91	70.5	0	...	...	
4.	wbs.	12	b	1	30.265	73.3	71.8	91	70.5	0	...	...	
6.	wbs.	12	b	0	30.278	74.8	72.3	87	71.0	0	...	...	...
8.	swbw.	12	bc	1	30.274	71.5	71.3	98	70.5	1	Cum.	...	
10.	swbw.	12	bc	1	30.275	70.8	70.3	97	70.5	1	Cir.	...	
Midt.	swbw.	12	bc	1	30.265	70.8	69.8	94	70.0	1	Str.	...	
Totals.	...	21	bc	9	3163	18.8	7.8	55	0.8	7	Cir str.	Str. & Cum.	
Mean.	s.w.	2		1	30.264	71.6	70.6	95	70.1	1			

SATURDAY, 28TH.

2.	w.s.w.	2	bew	1	30.239	70.8	70.3	97	71	4	...	Str.	At noon, lat. 38° 32' N. long. 33° 17' W. Temperature by self-registering thermo- meter, max. 74°, min. 68° 5. Current, S. 67° E. 15'. Heavy dew. 0.10 f.m. squall from S.W. Sp. gr. 1.02724.
4.	w.s.w.	3	ofr	1	30.221	68.3	67.8	97	71	10	...	Str.	
6.	Calm.	0	bc	1	30.224	69.3	68.8	97	...	4	...	Cum & Nb.	
8.	...	...	...	...	...	...	...	...	71	...	...	...	
10.	N.W.	3	bc	1	30.258	72.3	71.5	95	71.2	6	Cir.	Cum.	Light passing rain squalls from NE'S.
Noon.	N.W.	2	bc	1	30.249	72.0	71.0	94	71.5	7	Cir.	Cum.	
2.	N.W.	2	bcp	...	30.244	72.3	70.8	91	71.2	7	Str.	Cum.	
4.	w.s.w.	2	bc	...	30.248	73.3	70.8	87	71.2	7	Str.	Cum.	
6.	Nb.	3	bcp	...	30.241	71.8	69.3	87	71.0	7	Str.	Cum & Nb.	...
8.	Nb.	3	bcp	1	30.273	70.3	69.3	94	71.0	10	...	Cum str.	
10.	N.E.	3	bcp	1	30.284	69.3	67.8	91	70.5	9	...	Cum.	
Midt.	Nb.	4	bcp	1	30.278	68.8	67.8	94	70.5	9	...	Cum.	
Totals.	...	27	bcp	8	2759	8.5	105.2	34	11.1	80	Cir str.	Cum str. & Nimb.	
Mean.	swbw.	2		1	30.251	70.8	69.6	93	71.0	7			

## SUNDAY, 29TH JUNE 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.S.	3	crq	..	30.273	69.8	69.5	98	70.5	10	..	Cum.	At noon, lat. 37° 47' S. long. 31° 2' W. Temperature by self-registering thermo- meter, max. 72°, min. 66° 5. Current, s. 30° E. 9'.
4.	N.E.S.	4	bcq	..	30.290	72.8	70.8	89	71.0	6	Str.	Cum.	
6.	N.E.	5	bc	..	30.300	68.8	66.8	88	70.0	7	Str.	Cum.	
8.	N.E.	4	bcq	..	30.306	68.8	67.8	94	70.0	6	...	Cum.	
10.	N.E.	5	bcq	..	30.323	69.8	68.8	94	70.0	8	...	Cum.	
Noon.	N.E.	6	eq	..	30.333	70.8	69.8	94	...	10	...	Cm. & Nb.	
2.	N.E.E.	4	bcq	12	30.324	68.8	69.0	100	70.2	8	...	Cum.	
4.	N.E.E.	4	bcq	3	30.325	68.8	68.5	98	70.2	10	...	Cum.	
6.	N.E.E.	4	eq	12	30.322	68.3	66.8	97	70.5	10	...	Cum.	
8.	E.S.E.	5	eq	3	30.361	67.8	67.3	97	69.0	10	...	Cum.	
10.	E.S.E.	4	eq	3	30.396	67.8	66.8	94	69.0	9	...	Cm. str. & Nb.	
Midt.	E.S.E.	5	bc	3	30.407	66.8	65.8	94	69.0	9	...	Cum str.	
Totals.	..	53	bcq	16	3960	109.1	97.7	57	109.4	103	Str.	Cum. & Nimb.	
Mean.	N.E.E.	4		3	30.330	69.1	68.1	95	69.9	9			

## MONDAY, 30TH.

2.	E.S.E.	4	bc	2	30.412	66.8	64.8	88	69	4	...	Cum.	At noon, lat. 38° 30' S. long. 31° 14' W. Temperature by self-registering thermo- meter, max. 72°, min. 66°. Current, s. 34° W. 8'		
4.	E.S.E.	4	bc	2	30.416	66.8	64.0	84	69	4	...	Cum.			
6.	E.S.E.	3	bc	1	30.432	66.8	64.3	86	69	3	Cir str.	Cum.			
8.	N.E.E.	3	bc	1	30.465	67.8	65.8	88	68.5	3	Str.	Cum.			
10.	E.S.	3	bc	1	30.449	69.0	65.0	78	68.5	8	Str.	Cum.			
Noon.	E.S.	2	bc	1	30.446	68.8	65.0	79	69.0	7	Cir.	Cum.			
2.	E.S.	2	bc	1	30.439	69.8	66.8	83	...	6	...	Cum.			
4.	E.S.	3	bc	1	30.440	70.2	66.8	81	69.5	4	...	Cum.			
6.	E.S.	3	bc	1	30.440	70.0	66.8	82	69.5	3	...	Cum.			
8.	E.S.	3	bc	1	30.440	68.8	64.8	78	69.5	5	...	Str. cum.			
10.	E.S.	2	bc	1	30.450	68.3	65.3	83	69.5	5	...	Cum.			
Midt.	N.E.E.	3	bc	1	30.435	68.3	66.3	88	69.5	5	...	Cum.			
Totals.				...	35	bc	14	5255	101.5	65.7	38	10.5	57	Cir str.	Cum.
Mean.				E.S.	3		1	30.438	68.5	65.5	83	69.1	5		

## TUESDAY, 1ST JULY.

2.	E.N.E.	3	bc	1	30.445	67.8	65.8	88	69.2	5	...	Cum.	At noon, lat. 38° 24' s. long. 29° 9' w. Cm.&Nb. Temperature by self-regist-thermo- Cm.str. meter, max. 72°, min. 66° 3. Current, w. 5.
4.	E.	1	bc	0	30.416	67.8	65.8	88	69.7	4	...	Cum.	
6.	Calm.	0	bcm	0	30.425	67.3	64.8	85	69.7	7	...	Cum.str.	
8.	Calm.	0	bc	0	30.461	69.8	65.8	78	69.7	4	...	Cum.	
10.	Calm.	0	bc	...	30.443	69.3	67.3	88	70.7	3	Cir.	Cum.	
Noon.	Vble.	1	bc	...	30.427	70.8	66.8	78	72.0	3	Cir.	Cum.	
2.	E.N.E.	1	bc	...	30.415	70.8	66.8	78	71.0	6	Cir.	Cum.	
4.	Calm.	0	bc	...	30.391	71.0	67.3	80	71.0	9	...	Cum.	
6.	N.E.E.	1	bc	...	30.380	71.0	67.3	80	...	7	...	Cum.	
8.	E.	1	bc	...	30.390	69.8	66.8	83	...	7	...	Cum.	
10.	S.E.E.	1	bc	...	30.382	68.8	66.8	88	...	6	Cir.	Cum.	
Midt.	S.E.E.	1	bc	...	30.388	68.8	66.8	88	...	5	Cir.	Cum.	
Totals.	...	10	bc	1	4964	113.6	78.1	42	3.0	66	Cir.	Cum.	
Mean.	Easterly.	1		0	30.414	69.4	66.5	84	70.4	5			

## WEDNESDAY, 2D JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.b.s.	1	bc	...	30.365	66.3	64.5	89	...	4	Cir.	Cum.	At noon, lat. 38° 33' N. long. 28° 35' W. Temperature by self-registering thermo- meter, max. 73°, min. 64° 5.
4.	w.b.s.½N.	1	bc	...	30.331	65.8	63.8	88	...	5	Str.	Cum.	
6.	w.b.s.½N.	1	bc	...	30.328	66.8	64.8	88	...	7	...	Cum.	
8.	Calm.	0	bc	...	30.326	67.8	65.8	88	...	9	...	Cum.	11 A.M., left Fayal for St Michael's.
10.	Variable.	1	bc	...	30.330	71.3	66.8	76	...	9	...	Cum.	
Noon.	NW b.s.	1	bc	...	30.290	70.8	67.8	83	70	9	...	Cum.	
2.	N. N. W.	1	bc	...	30.288	70.8	67.8	83	70	8	...	Cum.	Noon summits of hills clouded.
4.	N. N. W.	2	bc	...	30.278	70.8	67.8	83	70	6	...	Cum.	
6.	NW b.w.	1	bc	...	30.247	69.5	66.0	81	70.2	5	...	Cum.	
8.	NW b.w.	2	bc	...	30.263	68.3	64.8	81	...	7	...	Cum.	
10.	W. N. W.	2	bc	0	30.263	67.8	65.3	85	69.0	3	...	Cum.	
Midt.	W. N. W.	3	bc	0	30.243	67.8	64.8	83	69.0	5	...	Cum.	
Totals.	...	16	bc	0	3552	103.8	70.0	48	41.2	77	Cir str.	Cum.	
Mean.	sw b.w.	1		0	30.296	68.6	65.8	84	69.7	6			

## THURSDAY, 3D.

2.	W. N. W.	3	bc	1	30.243	68.3	64.8	81	69.5	2	...	Str.	At noon, lat. 38° 11' N. long. 27° 9' W. Temperature by self-registering thermo- meter, max. 73° 2, min. 67° 2.
4.	N. N. W.	2	bc	1	30.241	68.8	63.8	78	69.5	3	...	Cum str.	
6.	N. N. W.	3	bc	1	30.209	68.0	65.8	87	69.0	4	...	Cum str.	
8.	w.b.s.	3	bc	1	30.211	69.8	67.3	85	69.5	3	...	Cum str.	Sp. gr. 1.02701.
10.	w.	3	bc	1	30.228	70.8	69.2	85	...	5	...	Cum.	
Noon.	w.	3	bc	1	30.210	71.8	68.8	84	...	6	...	Cum str.	
2.	w.b.s.	3	bc	1	30.190	70.8	68.8	88	70.0	4	Str.	Cum.	
4.	W. N. W.	3	bc	1	30.190	70.8	68.8	88	70.0	7	Cir str.	Cum.	
6.	w.b.s.	3	bc	1	30.207	71.8	68.8	84	70.7	7	Str.	Cum.	
8.	N. W.	2	bc	1	30.211	69.8	67.8	88	69.7	5	...	Nimb.	Nb. & Cum. str. Nb. & Cum.
10.	W. N. W.	3	bc	1	30.207	68.8	68.3	97	69.7	7	...		
Midt.	W. N. W.	2	bc	1	30.197	68.8	68.3	97	70.2	7	...		
Totals.	...	33	bc	12	2544	118.3	90.5	82	97.8	60	Cir str.	Cum., Cum str., & Nimb.	
Mean.	W. N. W.	3		1	30.212	69.9	67.5	87	69.8	5			

## FRIDAY, 4TH.

2.	W. N. W.	1	bc	1	30.190	68.8	66.8	88	69.7	6	...	Cum.	At noon, lat. 37° 47' N. long. 26° 9' W. Temperature by self-registering thermo- meter, max. 73°, min. 66° 2.
4.	W. N. W.	2	bcp	...	30.190	67.8	66.8	94	69.7	8	...	Cm. & Nb.	
6.	w.	1	bcp	...	30.172	68.8	67.8	94	69.2	9	...	Cm. & Str.	
8.	W. N. W.	2	bc	...	30.207	70.3	68.3	88	69.2	6	...	Cum str.	Current, s. 58. e. 9°. 3.20 A.M., heavy rain squall. Sp. gr. 1.02688.
10.	sw b.w.	1	bc	...	30.195	69.8	68.3	91	69.2	5	Cir.	Str.	
Noon.	W. N. W.	2	bc	...	30.178	69.8	67.8	88	69.5	7	Cir cum.	Str.	
2.	sw b.s.	2	bc	...	30.187	69.8	67.8	88	69.5	6	Cir cum.	Cum.	6.40 P.M., anchored off Point Delgada, St Michael's island.
4.	sw b.s.	3	bc	...	30.145	71.8	70.8	94	69.0	6	...	Cum.	
6.	w.b.s.	1	bc	...	30.158	71.8	70.3	91	...	5	...	Cm. & Nb.	
8.	W. N. W.	1	bc	...	30.147	70.8	69.8	94	...	4	Str.	Cum.	
10.	w.b.s.	2	bcp	...	30.162	69.3	67.8	91	...	6	...	Cum.	
Midt.	w.b.s.½N.	1	bcp	...	30.167	68.8	67.8	94	...	6	...	Cum.	
Totals.	...	19	bcp	...	2098	117.6	100.1	15	30	71	Cir cum str.	Str. cum. & Nimb.	
Mean.	W. N. W.	2		...	30.175	69.8	68.3	91	69.4	6			

## SATURDAY, 5TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2	w.s.w.	1	cp	...	30.143	68.3	67.3	94	...	10	...	Nimb.	At St Michael's. Temperature by self-registering thermo- meter, max. 76°, min. 66° 8'. 0.15 A.M., light rain squall from w.b.s.
4	Calm.	0	bc	...	30.133	68.3	67.8	97	...	8	...	Nb.&Cum.	
6	Calm.	0	bc	...	30.131	68.5	67.3	92	...	4	...	Cum.	
8	w.b.s.	1	bc	...	30.138	71.3	69.8	91	...	3	...	Cum.	
10	w.b.s.	2	bc	...	30.129	71.8	70.3	91	...	4	...	Cum.	
Noon.	w.b.s.	1	bc	...	30.106	72.8	69.8	84	...	7	...	Cum.	
2	w.	2	bc	...	30.082	74.3	71.3	84	...	6	...	Cum.	
4	w.b.s.	3	bc	...	30.125	74.8	71.8	84	...	5	...	Cir.	
6	swb.w.	1	bc	...	30.130	72.8	70.3	86	...	7	...	Str.	
8	w.b.s.	1	bc	...	30.132	71.0	69.0	88	...	4	...	Str.	
10	w.b.s.	1	bc	...	30.134	69.8	68.3	91	...	2	...	Str.	
Midt.	w.b.s.	1	bc	...	30.142	69.8	67.8	88	...	7	...	Str.	
Totals.	...	14	bcp	...	1525	13.5	110.8	110	...	67	...	Str.	Nimb. & Cum.
Mean.	w.b.s.	1		...	30.127	71.1	69.2	89	...	6	...		

## SUNDAY, 6TH.

2	Calm.	0	bc	...	30.087	68.8	67.8	94	...	10	...	Cum.	At St Michael's. Temperature by self-registering thermo- meter, max. 75°, min. 67° 5'.
4	Calm.	0	bc	...	30.065	68.8	67.8	94	...	5	...	Cum.	
6	w.s.w.	1	bc	...	30.087	69.3	68.3	94	...	8	...	Cum str. & Nb.	
8	w.	2	bc	...	30.087	70.8	69.8	94	...	7	...	Cum str.	
10	w.	2	bc	...	30.105	71.8	69.8	89	...	4	...	Cum.	
Noon.	w.b.s.	2	bc	...	30.082	73.8	70.8	84	...	7	...	Cum str.	
2	w.b.s.	1	bc	...	30.068	72.8	70.8	89	...	7	...	Cum.	
4	w.b.s.	1	bc	...	30.072	72.8	70.8	89	...	6	...	Str.	
6	swb.w.	1	bc	...	30.031	73.8	71.8	89	...	5	...	Str.	
8	swb.w.	2	bc	...	30.082	71.3	69.8	91	...	6	...	Cum str.	
10	w.s.w.	1	bcp	...	30.102	70.3	69.3	94	...	7	...	Cum & Nb.	
Midt.	w.s.w.	2	cpq	...	30.082	69.8	68.8	94	...	9	...	Cum & Nb.	
Totals.	...	15	bcp	...	950	14.1	115.6	15	...	81	...	Str.	Cum., Cum str., & Nimb.
Mean.	w.s.w.	1		...	30.079	71.2	69.6	91	...	7	...		

## MONDAY 7TH.

2	w.b.s.	2	bc	...	30.089	69.8	67.8	88	...	7	...	Cum.	At St Michael's. Temperature by self-registering thermo- meter, max. 77° 5', min. 68° 8'.
4	w.	1	bc	...	30.084	69.8	67.8	94	...	9	...	Cum.	
6	w.s.w.	1	c	...	30.105	70.0	69.0	94	...	10	...	Cum.	
8	w.b.s.	1	bcp	...	30.124	73.3	70.8	87	...	6	...	Cum.	
10	swb.w.	1	bc	...	30.117	75.8	73.8	89	...	3	...	Cum.	
Noon.	swb.w.	1	bc	...	30.119	75.8	73.8	89	...	5	...	Cum.	
2	w.s.w.	2	bc	...	30.129	74.8	71.8	84	...	7	...	Cir cum.	
4	w.s.w.	1	bc	...	30.129	73.8	71.8	89	...	8	...	Cum & Nb.	
6	w.	2	bc	...	30.137	73.8	71.8	89	...	8	...	Cum.	
8	swb.w.	1	bcd	...	30.139	72.3	71.8	97	...	9	...	Cum.	
10	Calm.	0	c	...	30.177	71.8	70.8	94	...	8	...	Cum str.	
Midt.	Calm.	0	bc	...	30.179	71.8	69.8	89	...	9	...	Cum str.	
Totals.	...	13	bcp	...	1528	31.8	10.8	3	...	89	...	Cir cum.	Cum. & Cum str.
Mean.	w.s.w.	1		...	30.127	72.6	70.9	90	...	7	...		

## TUESDAY, 8TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Parameter re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.179	70.8	67.8	83	...	7	...	Cum str.	At St Michael's. Temperature by self-registering thermo- meter, max. 75°, min. 69°.
4.	Calm.	0	bc	...	30.182	69.8	66.8	83	...	5	...	Cum.	
6.	N.	1	bc	...	30.229	69.8	67.8	88	...	4	...	Cum.	
8.	N <sup>W</sup> E.	2	bc	...	30.222	72.8	69.8	84	...	8	...	Cum str.	
10.	N <sup>W</sup> N.	1	bc	...	30.266	74.3	69.3	74	...	8	...	Cum str.	
Noon.	N <sup>W</sup> N.	3	bcq	...	30.270	72.8	69.8	84	...	8	...	Cum.	
2.	N <sup>W</sup> N.	3	bc	...	30.280	73.8	70.8	84	...	7	...	Cum str.	
4.	N.	2	bc	...	30.270	74.8	71.8	84	...	...	...	Cum str.	
6.	N. N. E.	3	bcq	...	30.297	71.8	68.8	84	...	8	...	Cum str.	
8.	N.	2	bc	...	30.283	70.8	67.8	83	...	6	...	Cum.	
10.	N <sup>W</sup> N.	1	bc	...	30.306	68.8	66.8	88	...	5	...	Cum.	
Midd.	N. N. W.	1	bc	...	30.365	68.8	66.8	88	...	4	...	Cum.	
Totals.	...	19	bcq	...	3149	19.1	104.1	47	...	70	...	Cum. & Cum str.	
Mean.	N <sup>W</sup> N.	2		...	30.262	71.6	68.7	84	...	6	...		

## WEDNESDAY, 9TH.

2.	N. N. W.	1	bc	...	30.338	68.8	66.8	88	...	9	...	Cum str.	At St Michael's. Temperature by self-registering thermo- meter, max. 74°, min. 67°.
4.	...	0	bc	...	30.340	67.8	65.8	88	...	10	...	Cum str.	
6.	N. N. E.	1	bc	...	30.367	67.8	64.8	83	...	8	...	Cum.	
8.	N. N. E.	2	bc	...	30.386	69.8	65.8	78	...	5	...	Cum.	
10.	N. N. E.	3	bc	...	30.343	71.8	66.8	74	...	4	...	Cum.	
Noon.	N <sup>W</sup> N.	2	bc	...	30.345	71.8	67.8	79	...	3	...	Cum.	
2.	N <sup>W</sup> N.	3	bcq	...	30.388	72.3	67.3	74	...	5	...	Cum.	
4.	N <sup>W</sup> N.	3	bcq	...	30.382	72.8	66.8	70	...	4	...	Cum.	
6.	N <sup>W</sup> N.	5	bc	...	30.382	69.8	66.8	83	...	3	...	Cum.	
8.	N <sup>W</sup> N.	3	bcq	...	30.416	69.8	66.8	83	...	4	...	Cum str.	
10.	N. N. E.	2	bc	...	30.418	68.8	66.8	88	70	3	...	Cum.	5 P.M., left St Michael's island for Madeira.
Midd.	N. N. E.	1	bc	...	30.418	68.8	66.8	88	70	3	...	Cum.	
Totals.	...	26	bcq	...	4523	0.1	79.1	16	...	61	...	Cum. & Cum str.	
Mean.	N. N. E.	2		...	30.377	70.0	66.6	81	70	5	...		

## THURSDAY, 10TH.

2.	Vble.	1	bc	...	30.349	69.3	66.8	85	70	5	...	Cum.	At noon, lat. 37° 26' S. long. 25° 14' W. Temperature by self-registering thermo- meter, max. 77.5°, min. 68° 0. 2 A.M., observed a lunar rainbow.
4.	Vble.	1	bc	...	30.333	68.3	66.8	91	70	4	...	Cum.	
6.	N. E.	2	bc	...	30.372	69.0	67.0	88	...	4	...	Cum. & N.b.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	N <sup>W</sup> N.	3	bc	...	30.385	71.8	68.8	84	71	4	...	Cir.	
Noon.	N. N. E.	4	bcq	...	30.382	73.8	69.8	79	71.2	8	...	Cum str.	
2.	N. N. E.	4	bcq	...	30.382	74.8	70.8	79	71.2	6	...	Cum str.	
4.	N. N. E.	4	bc	...	30.412	74.8	70.8	79	71.2	4	...	Cum str.	
6.	N. N. E.	4	bc	...	30.367	72.8	69.8	84	71	7	...	Cum str.	
8.	N. N. E.	4	bc	...	30.368	70.8	69.8	94	71	4	...	Cum.	11 P.M., rain squalls working up from N <sup>W</sup> E. Wind falling.
10.	N. N. E.	3	bc	2	30.361	70.8	68.3	85	71	7	...	Cir str.	
Midd.	N <sup>W</sup> E.	2	eqp	2	30.355	70.8	68.8	94	71	8	...	Cum. & N.b.	
Totals.	...	32	bcqp	...	4066	17.0	97.5	62	8.6	61	...	Cir str.	Cum. & Cum str.
Mean.	N. N. E.	3		2	30.369	71.5	68.9	86	70.9	5	...		

## FRIDAY, 11TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32, and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	3	bc		30.355	69.8	68.8	94	71	5	Str.	Cum.	At noon, lat. 36° 21' S. long. 23° 31' W. Temperature by self-registering thermo- meter, max. 77° 2', min. 69° 2'. Current, s. 55° W. 12'.
4.	N.	3	bc		30.296	69.8	68.8	94	70.5	6	Str.	Cum.	
6.	N.N.E.	4	bcp		30.278	70.0	69.0	94	70.5	7	Cir.	Cum.	
8.	N.N.W.	3	bcp		30.271	71.3	70.8	97	70.8	5	...	Cum.	
10.	N.W.	4	bc	1	30.279	72.8	70.8	89	71.5	7	Cir str.	Cm.&Nb.	
Noon.	N.W.	3	bc	1	30.251	74.3	72.8	91	71.5	6	...	Cum.	
2.	N.N.E.	4	bc	1	30.262	74.8	73.3	91	71.5	4	Cir str.	Cum str.	
4.	N.N.W.	3	bc	1	30.261	72.8	69.8	84	71.5	6	Cir str.	Cum.	
6.	N.N.E.	3	bc	1	30.259	72.8	70.8	89	71.8	5	Cir.	Cum.	
8.	N.E.	4	bcp	1	30.280	70.8	68.8	88	71.5	8	Cir str.	Cum.	
10.	N.E.	3	bcp	12	30.275	69.8	67.8	88	71.0	6	...	Cum.	
Midt.	N.E.	5	bc	12	30.265	69.8	66.8	83	71.0	5	...	Cm.&Nb.	
Totals.	...	42	bcp	10	3332	18.8	118.3	2	14.1	70	Cir str.	Cum. & Nimb.	
Mean.	N.E.	3		1	30.278	71.6	69.9	90	71.2	6			

## SATURDAY, 12TH.

2.	N.E.	5	bc	2	30.229	69.3	66.3	83	71	8	...	Cum.	At noon, lat. 35° 8' S. long. 21° 33' W. Temperature by self-registering thermo- meter, max. 75°, min. 67° 8'. Current, s. 27° W. 14'. Sp. gr. 1.02714.
4.	N.E.	4	bc	2	30.219	68.8	65.5	82	71	3	...	Cum.	
6.	N.E.	4	bc	1	30.230	68.8	65.8	83	70.5	3	Cir.	Cum.	
8.	N.E.	4	bc	1	30.260	70.8	67.8	83	70.7	3	Cir.	Cum.	
10.	N.E.	3	bc	1	30.266	73.3	68.8	77	71	3	Cir.	Cum.	
Noon.	N.E.	4	bc	1	30.276	73.8	69.3	76	71	4	Cir.	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	E.N.E.	3	bc	1	30.228	73.8	69.3	76	71	3	...	Str.&Cum.	
8.	N.	2	bc	1	30.256	69.8	66.8	83	70.5	3	...	Str. cum.	
10.	N.E.	2	bc	1	30.243	69.8	66.8	83	70	4	...	Cum.	
Midt.	N.E.	2	bc	1	30.209	69.3	66.8	86	70.2	3	Cir.	Cum.	
Totals.	...	33	bc	12	2416	7.5	73.2	12	6.9	37	Cir.	Cum. & Str.	
Mean.	N.E.	3		1	30.242	70.7	67.3	81	70.7	4			

## SUNDAY, 13TH.

2.	N.E.	2	bc	2	30.187	69.8	66.8	83	70	6	...	Cum.	At noon, lat. 34° 17' S. long. 20° 10' W. Temperature by self-registering thermo- meter, max. 78°, min. 67° 5'. Current, s. 45° W. 13'. Sp. gr. 1.02715.
4.	N.E.	3	bc	2	30.177	68.8	67.3	81	70	4	Cir cum.	Cum.	
6.	N.E.	2	bcp	2	30.193	69.3	66.8	85	70.5	6	...	Str. cum.	
8.	N.N.E.	3	bc	2	30.190	69.8	67.3	85	71	5	...	Cum.	
10.	N.N.E.	3	bc	2	30.197	72.8	68.8	79	71.7	3	Cir.	Str.	
Noon.	N.N.E.	2	bc	2	30.210	73.5	68.8	76	71.5	2	Cir.	Str.	
2.	N.N.E.	2	bc	1	30.179	74.3	68.8	72	71.5	3	Cir.	Str.	
4.	N.E.	3	bc	1	30.165	77.3	70.3	67	71.5	2	Cir.	...	
6.	N.E.	2	bc	1	30.162	72.8	67.8	74	71	1	Cir.	...	
8.	N.N.E.	3	b	1	30.185	70.3	66.3	78	71	0	...	...	
10.	N.N.E.	2	bc	1	30.205	69.8	66.8	83	71	1	Cir.	...	
Midt.	N.E.	3	bc	1	30.185	69.8	66.8	83	70.5	1	Cir.	Cum.	
Totals.	...	30	bcp	18	2335	18.3	92.6	956	11.2	34	Cir.	Str. & Cum.	
Mean.	N.N.E.	2		1	30.186	71.5	67.7	79	70.9	3			

## MONDAY, 14TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N. N. E.	2	bc	1	30.147	69.8	66.8	83	70.5	2	Cir cum.	...	At noon, lat. 33° 46' N. long. 19° 17' W. Temperature by self-registering thermo- meter, max. 78° 5, min. 68° 0. Current, s. 14° w. 10'. Slight N. N. E. swell.
4.	N. N. E.	2	bc	1	30.161	69.3	66.3	83	70.0	3	...	Str. cum.	
6.	E. N. E.	1	c	1	30.176	69.3	66.8	85	70.2	10	...	Cum.	
8.	E. N. E.	1	bc	1	30.218	71.0	68.8	87	70.5	7	...	Str. cum.	
10.	E. N. E.	2	bc	1	30.225	71.8	69.3	86	70.7	3	...	Str. cum.	
Noon.	N. E. by E.	1	bc	0	30.215	72.8	69.3	82	71.0	1	...	Str. cum.	
2.	E. N. E.	1	bc	0	30.203	76.3	70.8	73	71.5	1	Str.	Cum.	
4.	E. N. E.	3	bc	1	30.138	75.8	71.8	79	71.2	3	Str.	Cum.	
6.	N. E. by E.	2	bc	1	30.169	73.8	70.3	82	71.2	5	...	Cum.	
8.	E.	2	bc	1	30.205	71.8	70.8	94	70	6	...	Cum.	
10.	E. N. E.	3	bcq	2	30.212	70.3	68.3	88	71	5	...	Cum.	
Midt.	E. N. E.	2	bed	2	30.205	70.3	68.3	88	71	1	...	Cum.	
Totals	...	22	bcqd	12	2274	22.3	107.6	50	8.6	47	Str.	Cum. & Str.	
Mean.	N. E. by E.	2		1	30.189	71.9	69.0	84	70.7	4			

## TUESDAY, 15TH.

2.	E.	3	bc	2	30-176	70.3	67.8	85	70.5	3	...	Cum.	At noon, lat. 33° 11' N. long. 18° 13' W. Temperature by self-registering thermo- meter, max. 74°, min. 68° 5. Current, s. 16° w. 6'. Easterly swell. Sp. gr. 1.02746.
4.	E <sup>b</sup> N.	5	bcq	2	30-207	70.3	67.8	85	70.5	6	Str.	Cum.	
6.	E <sup>b</sup> N.	4	bcq	2	30-198	69.3	67.8	91	70	7	Str.	Cum.	
8.	E <sup>b</sup> N.	5	bcq	2	30-210	69.8	66.8	83	70	8	Str.	Cum.	
10.	E <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	6	bcq	4	30-225	70.3	68.3	88	71	8	Str.	Cum.	
Noon.	E.N.E.	4	bcq	5	30-215	72.3	69.3	84	71.5	7	Cir str.	Cum.	
2.	N.E <sup>b</sup> E.	5	bcq	3	30-215	72.3	68.3	79	70.5	7	...	Cum.	
4.	E.N.E.	4	bcq	3	30-215	71.8	69.8	89	70.5	6	...	Cum.	
6.	E.N.E.	5	bc	2	30-215	71.8	67.8	79	70.7	2	Str.	Cum.	
8.	E.N.E.	4	bc	1	30-209	70.0	68.5	91	69.5	3	Str.	9 to 10 P.M., wind light and variable.	
10.	E <sup>b</sup> S.	2	bc	2	...	...	...	...	...	1	Cir.		...
Midt.	N.N.E.	3	b	2	30-226	68.8	67.8	94	...	0	...		...
Totals.	...	50	bcqm	30	2311	7.0	90.0	948	4.7	58	Cir str.	Cum.	
Mean.	E.N.E.	4		2	30-210	70.6	68.2	86	70.7	5			

## WEDNESDAY, 16TH.

2.	S.E.	1	b	1	30.205	68.8	67.3	94	...	0	...	...	At Madeira. Temperature by self-registering thermo- meter, max. 76°, min. 67° 5. 7 A.M., anchored in Funchal Bay.
4.	Calm.	0	bc	1	30.207	67.8	65.8	88	...	1	Str.	...	
6.	Calm.	0	bc	...	30.215	68.0	66.3	90	71.0	1	Str.	...	
8.	S.N.E.	1	bc	...	30.212	69.8	66.8	83	71.0	2	Str.	...	
10.	S.S.W.	1	bc	...	30.205	71.8	68.8	84	...	2	Cir.	...	
Noon.	W.S.W.	2	bc	...	30.210	72.8	70.3	87	...	3	Cir.	Str.	
2.	sw by ½ W.	1	bc	...	30.209	74.3	72.3	89	...	3	Cir str.	...	
4.	sw by ½ W.	1	...	...	30.229	73.8	70.8	84	...	...	...	...	
6.	Calm.	0	bc	...	30.254	77.3	72.3	75	...	1	...	Str.	
8.	Calm.	0	bc	...	30.254	71.8	68.8	84	...	1	Cir.	...	
10.	W.N.W.	1	bc	...	30.255	68.8	66.8	88	...	1	Str.	Cum.	
Midt.	W.N.W.	1	bc	...	30.251	68.3	66.8	91	...	1	Str.	Cum.	
Totals.	...	9	bc	2	2706	13.3	103.1	77	...	16	Cir str.	Str. & Cum.	
Mean.	Variable.	1		1	30.225	71.1	68.6	86	71	1			

## THURSDAY, 17TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.			Humidity. Sat. 10.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	Calm.	0	bc	...	30.235	67.8	66.8	94	...	3	Cir cum.	...	...	At Madeira.
4.	Calm.	0	bc	...	30.237	66.8	64.8	88	...	4	Str. cum.	...	...	Temperature by self-registering thermometer, max. 75°, min. 67° 5.
6.	Vble.	1	bc	...	30.260	67.3	65.3	88	...	1	Cum.	...	...	
8.	Calm.	0	bc	...	30.265	69.8	66.8	83	...	1	Str. cum.	...	...	Strong S.E. breeze outside.
10.	S.S.W.	12	bc	...	30.288	71.8	69.3	86	...	3	Cum.	...	...	
Noon.	S.S.W.	12	bc	...	30.286	71.8	69.3	86	...	3	Cum.	...	...	
2.	W.S.W.	1	bc	...	30.266	72.3	68.8	82	...	2	Str.	...	...	
4.	S.E. ½ E.	12	bc	...	30.265	72.8	68.8	79	...	4	Str.	...	...	
6.	S.E. ½ E.	1	bc	...	30.228	73.8	70.8	84	...	3	Cum.	...	...	8 P.M., left Funchal for Porto Grande.
8.	...	...	bc	...	...	...	...	...	...	2	...	...	...	St Vincent.
10.	E.N.E.	8	bc	...	30.261	69.8	66.8	83	...	3	Cum.	...	...	
Midt.	E.N.E.	6	bc	...	30.236	69.3	66.8	86	...	2	Cum.	...	...	
Totals.	...	23	bc	...	2827	3.3	84.3	59	...	31	Cir cum.	Str. & Cum.		
Mean. Variable.	...	2	...	...	30.257	70.3	67.7	85	...	3				

## FRIDAY, 18TH.

2.	N.E.	3	bc	3	30.237	68.8	67.8	94	...	3	Cum.	...	...	At noon, lat. 30° 49' S. long. 17° 59' W.
4.	E.N.E.	7	bc	3	30.219	68.8	67.8	94	...	3	Cum.	...	...	Temperature by self-registering thermometer, max. 75°, min. 66° 5.
6.	N.N.E.	6	bc	3	30.250	69.3	66.8	86	...	2	Cum.	...	...	Current, S. 21° W. 7.
8.	N.E. ½ E.	5	bc	...	30.237	72.3	70.3	89	...	...	Cum.	...	...	
10.	N.E. ½ N.	6	bc	4	30.278	71.5	68.8	84	70.5	4	Cum.	...	...	
Noon.	N.E. ½ N.	5	bc	4	30.260	72.3	68.8	82	70.5	3	Cum str.	...	...	
2.	N.E. ½ N.	5	bc	...	30.239	74.8	69.8	74	70.5	4	Cum str.	...	...	Sp. gr. 1.02733.
4.	N.E. ½ N.	6	bcq	...	30.209	75.3	70.8	77	71	7	Cum str.	...	...	
6.	N.E. ½ N.	5	bcq	...	30.245	72.8	70.3	86	70.5	6	Cum.	...	...	
8.	N.E.	6	bc	...	30.185	70.8	68.8	88	...	7	Cum str.	...	...	
10.	N.E.	5	bcq	4	30.185	70.3	66.8	81	70.5	8	Cum.	...	...	
Midt.	N.E.	6	bcq	5	30.147	70.3	66.8	81	70.5	9	Cum.	...	...	
Totals.	...	65	bcq	26	2691	17.3	103.6	56	4.0	56	Cum. & Cum str.			
Mean.	N.E.	5	...	4	30.224	71.4	68.6	85	70.6	5				

## SATURDAY, 19TH.

2.	N.E.	5	bc	3	30.055	70.3	66.8	81	69	9	Cum.	...	...	At noon, lat. 28° 42' S. long. 18° 7' W.
4.	N.E. ½ E.	6	bcm	3	30.065	69.8	67.8	88	69.5	7	Cum.	...	...	Temperature by self-registering thermometer, max. 73° 5, min. 68° 0.
6.	N.E. ½ E.	7	bcm	3	29.988	69.3	67.3	88	67.5	1	...	...	...	Current, W. 8'.
8.	N.E. ½ E.	6	bcm	2	30.016	71.8	69.3	86	69.7	2	Cum.	...	...	
10.	Vble.	2	bcm	2	30.025	73.8	71.3	86	70.5	2	Str. cum.	...	...	10 A.M. to 5 P.M., under the lee of Palma island.
Noon.	Vble.	1	bcm	2	30.014	74.8	70.8	79	71.8	2	Str. cum.	...	...	Sp. gr. 1.02739.
2.	N.E.	2	bcm	3	30.014	74.3	71.3	84	71.5	0	...	...	...	
4.	N.E.	2	bcm	3	29.991	76.3	71.8	77	70.5	1	Str.	...	...	
6.	N.N.E.	4	bcm	2	30.000	70.8	68.8	88	66.5	1	Str.	...	...	
8.	N. ½ E.	5	bcm	2	30.026	69.8	68.8	94	71.0	2	Str.	...	...	
10.	N. ½ E.	5	b	3	29.982	69.8	69.8	100	71.0	0	...	...	...	
Midt.	E.N.E.	3	bc	3	29.985	69.8	68.8	94	71.0	8	Cum str.	...	...	
Totals.	...	48	bcm	31	161	20.6	112.6	85	119.5	35	Str. & Cum.			
Mean.	N.E.	4	...	3	30.013	71.7	69.4	87	69.9	3				

SUNDAY, 20TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	5	bc	3	29.967	69.8	67.8	88	71.5	3	...	Cum.	At noon, lat. 27° 0' N. long. 19° 38' W. Temperature by self-registering thermo- meter, max. 74°, min. 69°. Current, none. Wind variable. Sp. gr. 1.02755.
4.	N.N.E.	4	bc	2	29.953	69.8	67.8	88	71.8	8	...	Cum.	
6.	E.	4	bcm	2	29.954	69.8	68.8	94	71.6	6	Cir.	Cum.	
8.	N.N.E.	4	bc	...	29.947	70.3	68.8	91	70.5	7	...	Cum.	
10.	N.E.	3	bc	1	29.974	71.3	68.8	86	71.5	4	Cir str.	...	
Noon.	N.E.	2	bcm	1	29.980	73.3	70.5	85	72.5	5	Cir str.	...	
2.	N.E.	3	bc	...	29.967	73.3	71.3	89	72.6	6	...	Str. cum.	
4.	N.N.E.	4	c	...	29.932	71.8	69.8	89	72.6	10	...	Str. cum.	
6.	N.E.	3	bcm	2	29.925	70.8	69.3	91	71.5	6	Cir str.	Cum.	
8.	N.E.	4	cm	...	29.927	70.8	68.8	88	71.5	10	Cir str.	Cum.	
10.	N.E.	4	bcm	1	29.948	70.8	69.3	91	71.7	8	Str.	Cum.	
Midd.	N.E.	4	bcm	1	29.949	70.0	68.8	93	71.5	6	Str.	Cum.	
Totals.	...	44	...	13	11423	11.8	109.8	113	17.7	79	Cir str.	Str. & Cum.	
Mean.	N.E.	4	bcm	2	29.952	71.0	69.1	89	71.5	7	Cir str.	Str. & Cum.	

MONDAY, 21st.

2.	N.N.E.	3	bc	2	29.895	69.8	69.8	100	71.5	7	Str.	Cum.	At noon, lat. 25° 51' N. long. 20° 15' W. Temperature by self-registering thermo- meter, max. 77°, min. 69° 5. Current, s. 64° W. 17'. Sp. gr. 1.02753. Sea very phosphorescent.
4.	N.N.E.	4	bc	2	29.925	69.8	68.8	94	71.5	8	Str.	Str. cum.	
6.	N.E.	3	c	1	29.963	71.3	70.0	93	71.5	16	...	Cum.	
8.	N.E.	3	bcm	2	29.999	71.8	69.8	89	72.7	7	Cir.	Cum.	
10.	N.N.E.	3	bcm	2	30.016	72.3	70.3	89	72.6	6	Str.	Cum.	
Noon.	N.E.	3	bcm	1	30.033	74.3	72.3	89	72.5	9	Str.	Cum.	
2.	N.E.	3	bcm	1	30.005	75.8	72.8	84	72.5	6	Cir.	Sm. cum.	
4.	N.N.E.	4	bcm	1	29.980	72.8	71.3	91	72.5	8	...	Cum.	
6.	N.N.E.	6	bcm	2	29.967	71.8	71.0	95	72.5	2	Cir.	Str. cum.	
8.	N.N.E.	4	bcd	2	29.982	71.8	70.8	94	72.5	7	Cir.	Str. cum.	
10.	N.E.	6	bc	2	29.984	71.8	70.8	94	72.5	6	Cir.	Cum.	Sea very phosphorescent.
Midd.	N.E.	5	bc	1	30.019	71.8	70.8	94	72.5	5	Str.	Cum.	
Totals.	...	47	...	19	11768	25.1	8.5	26	26.0	81	Cir str.	Str. & Cum.	
Mean.	N.E.	4	bcm	2	29.981	72.1	70.7	92	72.2	7	Cir str.	Str. & Cum.	

TUESDAY, 22d.

2.	N.E.	4	bc	1	30.020	72.0	71.0	94	72.8	9	...	Cum.	At noon, lat. 24° 7' N. long. 21° 18' W. Temperature by self-registering thermo- meter, max. 78°, min. 70° 5. Current, s. 53° W. 11'. Sp. gr. 1.02762.
4.	N.N.E.	3	bc	1	30.011	71.8	70.8	94	72.8	6	...	Cum.	
6.	N.N.E.	4	bc	...	30.035	71.8	71.5	98	72.9	9	...	Cum.	
8.	N.N.E.	5	bc	2	30.060	73.3	72.0	92	72.7	7	...	Cum.	
10.	N.N.E.	3	bc	2	30.068	73.5	72.3	93	73.8	8	Cir.	Cum.	
Noon.	N.N.E.	4	bcm	1	30.049	75.3	73.3	89	73.2	0	...	...	
2.	N.N.E.	3	bcm	1	30.053	75.3	73.3	89	73.5	1	Cir.	...	
4.	N.N.E.	3	bcm	1	30.036	76.8	74.8	89	73.7	1	Cir.	...	
6.	N.N.E.	3	bc	1	29.992	74.8	72.8	89	73.2	2	Cir.	...	
8.	N.N.E.	4	bc	2	30.029	73.8	72.8	94	73.3	3	Cir cum.	Str.	
10.	N.N.E.	3	bwm	2	30.059	72.8	71.8	94	73.0	0	...	...	
Midd.	N.N.E.	3	bwm	1	30.042	72.8	71.8	94	73.0	0	...	...	
Totals.	...	42	...	16	454	11.0	28.2	29	34.4	46	Cir.	Cum.	
Mean.	N.N.E.	3	bcm	1	30.038	73.7	72.3	92	72.9	4	Cir.	Cum.	

WEDNESDAY, 23<sup>d</sup> JULY 1873.

Hour.	Wind.		Weather	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	4	bc	1	30.037	72.8	72.3	97	72.5	1	Cir.	...	At noon, lat. 22° 18' N. long. 22° 2' W. Temperature by self-registering thermo- meter, max. 77°, min. 71° 5. Current, s. 5.
4.	N.N.E.	3	bc	1	30.013	72.3	71.8	97	72.5	1	Cir.	...	
6.	N.N.E.	4	bcm	1	29.988	72.8	72.0	95	73.0	6	Cir.	Cum.	
8.	N.N.E.	3	bcm	2	30.034	73.8	71.8	89	73.5	4	...	Cum.	
10.	N.N.E.	4	bcm	2	30.034	73.8	72.8	94	74.0	3	...	Cum.	
Noon.	N.N.E.	4	bcm	2	30.029	74.8	73.8	89	73.7	3	Cir.	Cum.	Sp. gr. 1.02727.
2.	N.N.E.	5	bcm	3	30.008	76.8	74.8	89	74.0	1	Cir.	Cum.	
4.	N.E.	4	bcm	4	29.959	75.3	73.3	89	74.0	0	...	...	
6.	N.N.E.	5	bcm	3	29.967	74.8	73.3	91	74.0	0	...	...	
8.	N.N.E.	4	bcm	3	30.001	73.3	72.3	94	73.5	0	...	...	
10.	N.E.	3	bc	2	30.025	72.8	71.8	94	73.0	8	...	Cum.	Midt.
Midt.	N.E.	2	bc	2	30.025	72.8	72.8	100	73.0	3	...	Cum.	
Totals.	...	45	bcm	24	120	46.1	32.8	43	40.7	30	Cir.	Cum.	
Mean.	N.N.E.	4		2	30.010	73.8	72.7	94	73.4	2			

THURSDAY, 24<sup>TH</sup>.

2.	N.E.N.	3	bcm	2	29.997	72.8	71.5	92	73	5	...	Cum str.	At noon, lat. 20° 58' N. long. 22° 57' W. Temperature by self-registering thermo- meter, max. 77°, min. 72°. Current, s. 63° W. 4.
4.	N.E.N.	2	bcm	2	29.979	72.3	71.3	94	73.2	6	...	Cum str.	
6.	N.E.N.	3	bcm	2	30.000	72.8	71.8	94	73.5	6	Cir str.	Cum.	
8.	N.N.E.	2	bcm	1	30.002	73.3	72.3	94	73.5	5	Cir.	Cum.	
10.	N.N.E.	3	bcm	2	30.014	73.8	71.8	89	73.8	6	Cir.	Cum.	
Noon.	N.N.E.	3	bcm	2	29.979	74.8	72.3	87	74.0	3	...	Cum.	Sp. gr. 1.02695.
2.	N.N.E.	5	bcm	4	29.972	75.3	74.3	94	74	4	...	Cum str.	
4.	N.N.E.	6	cm	4	29.947	74.8	72.8	89	74	8	...	Cum str.	
6.	N.E.N.	4	bcm	4	29.929	73.8	71.8	89	73.7	9	...	Cum.	
8.	N.N.E.	3	bcm	3	29.939	73.8	71.5	88	73.5	8	...	Cum.	
10.	N.E.	5	ocq	4	29.977	73.8	71.8	89	73.5	8	...	Cum.	Midt.
Midt.	N.E.	3	eq	3	29.961	73.3	71.8	91	73.5	8	...	Cum.	
Totals.	...	42	bcm	33	116.96	44.6	25.0	10	43.2	76	Cir.	Cum. & Cum str.	
Mean.	N.E.N.	3		3	29.975	73.7	72.1	91	73.6	6			

FRIDAY, 25<sup>TH</sup>.

2.	N.E.	4	bc	3	29.967	73.8	71.8	89	73.7	10	...	Cum str.	At noon, lat. 19° 11' N. long. 24° 7' W. Temperature by self-registering thermo- meter, max. 78° 5, min. 72° 0. Current, s. 51° W. 11.
4.	N.N.E.	3	bc	2	29.979	72.8	71.8	94	73.7	9	...	Cum str.	
6.	N.E.	2	c	2	30.006	72.8	70.0	85	73.7	10	...	Cum.	
8.	N.E.	3	c	2	30.017	73.5	70.8	85	74	9	...	Cum.	
10.	N.E.	2	c	1	30.030	71.8	70.3	91	74.5	10	Str.	Cum.	
Noon.	N.E.	2	bc	1	30.048	75.8	74.3	91	74.5	8	Str.	Cum.	Sp. gr. 1.02717.
2.	N.E.	2	bc	1	29.986	75.3	72.3	84	75	8	Cir.	Cum str.	
4.	N.E.	2	bc	1	29.977	77.5	73.5	79	75	8	Cir.	Str.	
6.	N.E.	3	...	1	29.974	74.8	71.8	84	74.5	...	...	...	
8.	N.E.	3	bc	1	30.036	73.8	71.8	89	74	4	...	Str. & Nb.	
10.	N.E.	2	bc	1	30.038	73.8	71.8	89	73.5	2	...	Str.	Midt.
Midt.	N.E.	2	bc	1	30.025	73.8	71.8	89	74	6	Str.	Cum.	
Totals.	...	30	bc	16	0.83	49.5	22.0	89	50.1	84	Cir str.	Cum. & Cum str.	
Mean.	N.E.	2		1	30.007	74.1	71.8	87	74.2	8			

SATURDAY, 26TH JULY 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre- duced to 32° and Sea Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.E.	3	oc	1	29.971	73.8	71.8	89	74	9	...	Cum.	At noon, lat. 17° 54' N. long. 24° 41' W. Temperature by self-registering thermo- meter, max. 77° 8', min. 71° 5'. Current, w. 8'.
4.	E.S.E.	3	ocd	1	29.961	72.8	71.8	94	73.5	9	...	Cum.	
6.	E.S.	1	ocpd	1	30.008	71.8	71.8	100	...	10	...	Cum. & Nb.	
8.	E.S.	3	fd.	1	30.012	72.8	72.8	100	74.5	10	...	Str.	
10.	E.S.N.	1	bcd	1	30.042	74.3	74.3	100	74.7	9	...	Cum. & Nb.	Sp. gr. 1.02709.
Noon.	N.E.½ E.	2	bcp	1	30.061	76.5	75.8	96	75	7	Cir.	Cum. & Nb.	
2.	N.E.½ E.	3	bcp	1	30.026	75.0	73.8	93	75	4	Str.	Cum.	
4.	N.E.½ E.	2	ocp	...	30.016	74.3	73.8	97	75	7	Str.	Cum.	
6.	N.E.½ E.	3	bc	1	29.993	74.8	73.8	94	75	7	Cir str.	Cum str.	Squalls from the hills.
8.	E.S.	3	bc	1	30.025	75.8	74.8	94	75.2	8	...	Cum. & Nb.	
10.	E.N.E.	3	bc	2	30.062	74.5	73.8	96	75.7	4	...	Cum. & Nb.	
Midt.	E.N.E.	3	bc	1	30.051	74.8	74.0	96	75.2	3	...	Str. cum.	
Totals.	...	29	bcp	12	228	51.2	42.3	69	52.8	87	Cir str.	Cum. & Nimb.	
Mean.	E.S.N.	2		1	30.019	74.3	73.5	96	74.8	7			

SUNDAY, 27TH.

2.	N.E.½ N.	3	bc	...	30.032	74.8	74.3	97	75	2	Str.	Cum.	At noon, lat. 17° 3' N. long. 24° 53' W. Temperature by self-registering thermo- meter, max. 79°, min. 73°.
4.	N.E.½ N.	3	bc	...	30.008	74.3	73.8	97	75	3	Str.	Cum.	
6.	N.N.E.	2	cf	...	30.003	73.8	72.8	94	75.5	5	...	Cum.	
8.	N.N.E.	2	cf	...	30.055	73.3	73.3	100	75	8	...	Cum.	
10.	N.N.E.	3	cf	...	30.049	75.8	74.8	94	75	8	...	Str.	10 A.M., fog and mist lifted. Sp. gr. 1.02708. 4.15 P.M., anchored in Porto Grande, St Vincent.
Noon.	N.N.E.	4	bcm	1	30.005	75.8	76.8	94	76	6	...	Cum.	
2.	N.E.	3	bcm	...	29.984	77.5	75.0	86	...	8	...	Cum str.	
4.	N.E.½ E.	4	bcm	...	29.974	78.3	75.3	84	...	7	...	Cum str.	
6.	N.N.E.	3	bcm	...	29.978	76.8	74.8	89	...	7	...	Cum.	Squalls from the hills.
8.	N.E.½ E.	4	bcm	...	29.994	75.3	73.8	91	...	9	...	Cum.	
10.	N.N.E.	3	cm	...	30.025	75.8	73.8	89	...	10	...	Cum str.	
Midt.	N.E.½ E.	5	cm	...	30.018	75.8	74.8	94	...	10	Cir str.	Nimb.	
Totals.	...	39	bcmf	1	125	68.3	53.3	29	31.5	83	Cir str.	Cum. & Cum str.	
Mean.	N.E.½ N.	3		...	30.010	75.7	74.4	92	75.2	7			

MONDAY, 28TH.

2.	N.E.½ E.	3	bcq	...	29.978	75.3	72.8	87	...	5	...	Str.	At St Vincent. Temperature by self-registering thermo- meter, max. 81°, min. 73°.
4.	N.E.½ N.	4	bcq	...	29.974	74.8	72.8	89	...	8	...	Cum str.	
6.	N.E.½ N.	5	bcq	...	29.962	73.8	72.3	91	...	6	...	Cum str.	
8.	N.E.½ N.	4	bcq	...	29.977	74.8	73.8	94	...	4	...	Cum str.	
10.	N.E.½ E.	4	bcq	...	29.979	78.8	75.8	85	...	5	Str.	Cum.	Squalls from the hills; occasionally reaching to force 7.
Noon.	N.E.½ E.	5	bcq	...	29.961	79.3	76.3	85	...	4	...	Cum.	
2.	N.E.½ N.	5	bcq	...	29.920	79.3	76.3	85	...	7	Cir.	Cum.	
4.	N.E.½ E.	4	bcq	...	29.896	78.3	75.3	84	...	5	Str.	Cum.	
6.	N.E.½ E.	4	bcq	...	29.915	76.8	74.8	89	...	7	Str.	Cum.	
8.	N.E.½ E.	5	bcq	...	29.920	75.8	73.8	89	...	...	...	Cum.	
10.	N.E.½ E.	4	bcq	...	29.920	75.8	73.8	89	...	...	...	Cum.	
Midt.	N.E.½ E.	3	bcq	...	29.921	75.8	73.3	87	...	...	...	Cum.	
Totals.	...	50	bcq	...	11323	78.6	51.1	94	...	51	Cir str.	Cum. & Cum str.	
Mean.	N.E.	4		...	29.944	76.5	74.3	88	...	6			

## TUESDAY, 29TH JULY 1873.

Hour.	Wind.		Weather	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N E $\frac{1}{2}$ E.	3	bcq	...	29.932	76.8	75.3	91	...	4	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 80° 2, min. 73° 2.
4.	N E $\frac{1}{2}$ E.	12	bcq	...	29.924	75.8	74.3	91	...	4	...	Cum.	
6.	N E $\frac{1}{2}$ E.	3	cm	...	29.944	74.8	73.3	91	...	10	...	Cum.	
8.	N E $\frac{1}{2}$ E.	12	cm	...	29.944	75.3	74.3	94	...	9	...	Cum.	
10.	N E $\frac{1}{2}$ E.	12	bc	...	29.946	77.8	74.8	84	...	9	...	Cum.	
Noon.	N E $\frac{1}{2}$ E.	12	bc	...	29.943	79.3	76.3	85	...	9	...	Cum.	
2.	N E $\frac{1}{2}$ E.	3	bc	...	29.941	79.8	78.3	93	...	8	...	Cum.	
4.	N E $\frac{1}{2}$ E.	12	bc	...	29.919	78.8	76.3	87	...	6	...	Cum.	
6.	N E $\frac{1}{2}$ E.	12	c	...	29.919	77.0	74.8	88	...	10	...	Cum.	
8.	N E $\frac{1}{2}$ E.	12	c	...	29.919	76.8	74.8	89	...	10	...	Cum.	
10.	N E $\frac{1}{2}$ E.	3	c	...	29.989	76.8	75.3	91	...	10	...	Cum.	
Midt.	N E $\frac{1}{2}$ E.	3	bcq	...	29.980	75.8	74.3	91	...	9	...	Cum.	
Totals.	...	29	bcqm	...	11300	84.8	62.1	115	...	98	...	Cum.	
Mean.	N E $\frac{1}{2}$ E.	2		...	29.942	77.1	75.2	89	...	8	...	Cum.	

## WEDNESDAY, 30TH.

2.	N E $\frac{1}{2}$ E.	12	ocr	...	29.985	74.8	73.8	94	...	10	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 81°, min. 73°.
4.	N E $\frac{1}{2}$ E.	3	ocr	...	29.985	74.3	72.8	91	...	10	...	Cum.	
6.	N E $\frac{1}{2}$ E.	3	ocr	...	30.018	74.0	73.8	98	...	10	...	Cum.	
8.	N E $\frac{1}{2}$ E.	12	oe	...	30.051	75.8	74.8	94	...	10	...	Cum.	
10.	N E $\frac{1}{2}$ E.	12	bc	...	30.055	76.8	74.8	89	...	8	...	Cum.	
Noon.	N E $\frac{1}{2}$ E.	12	bc	...	30.044	78.3	75.8	87	...	9	...	Cum.	
2.	N E $\frac{1}{2}$ E.	12	bc	...	30.019	78.8	76.8	89	...	8	...	Cum.	
4.	N E $\frac{1}{2}$ E.	12	bc	...	30.020	78.3	76.8	91	...	9	...	Cum.	
6.	N E $\frac{1}{2}$ E.	12	oe	...	30.059	75.8	75.0	95	...	10	...	Cum.	
8.	N E $\frac{1}{2}$ E.	12	ocr	...	30.053	75.8	75.8	100	...	8	...	Cum.	
10.	N E $\frac{1}{2}$ E.	3	ocr	...	30.078	75.3	74.8	97	...	9	...	Cum.	
Midt.	N E $\frac{1}{2}$ E.	2	bc	...	30.079	74.8	73.8	94	...	9	...	Cum.	
Totals.	...	26	bc & ocr	...	406	72.8	58.8	39	...	110	...	Cum.	
Mean.	N E $\frac{1}{2}$ E.	2		...	30.024	76.1	74.9	93	...	9	...	Cum.	

## THURSDAY, 31ST.

2.	N E $\frac{1}{2}$ E.	1	oe	...	30.041	74.8	73.8	94	...	9	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 78°, min. 73°.
4.	N E $\frac{1}{2}$ E.	3	oe	...	30.042	74.3	73.0	93	...	10	...	Cum.	
6.	N E $\frac{1}{2}$ E.	3	c	...	30.044	73.8	72.8	94	...	10	...	Cum.	
8.	N E $\frac{1}{2}$ E.	3	cq	...	30.052	74.8	72.8	89	...	10	...	Cum.	
10.	N E $\frac{1}{2}$ E.	6	bcq	...	30.032	75.8	73.8	89	...	5	...	Cum.	
Noon.	N E $\frac{1}{2}$ E.	5	bcq	...	30.025	76.3	73.8	87	...	4	...	Cum.	
2.	N E $\frac{1}{2}$ E.	8	bcq	...	29.973	76.8	74.3	87	...	4	...	Cum.	
4.	N E $\frac{1}{2}$ E.	5	bcq	...	29.958	76.8	73.8	84	...	4	...	Cum.	
6.	N E $\frac{1}{2}$ E.	8	bcq	...	29.962	75.8	74.3	91	...	6	...	Cum.	
8.	N E $\frac{1}{2}$ E.	7	bcq	...	29.959	74.8	72.8	89	...	4	...	Cum.	
10.	N E $\frac{1}{2}$ E.	7	bcq	...	29.960	74.8	72.8	89	...	4	...	Cum.	
Midt.	N E $\frac{1}{2}$ E.	6	bcq	...	29.977	74.8	72.8	89	...	4	...	Cum.	
Totals.	...	62	bcq	...	925	63.6	40.8	115	...	74	...	Cum.	
Mean.	N E $\frac{1}{2}$ E.	5		...	30.002	75.3	73.4	89	...	6	...	Cum.	

## FRIDAY, 1st AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE½E.	6	bcq	...	29.955	74.8	71.8	84	...	3	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 81°, min. 73° 5.
4.	NNE½E.	5	bcq	...	29.957	73.8	72.3	91	...	3	...	Cum.	
6.	NE½N.	5	bcq	...	29.955	74.0	73.0	94	...	8	...	Cum str.	
8.	NE½N.	5	bcq	...	29.975	75.8	74.3	91	...	3	...	Cum.	
10.	NE½N.	4	bcq	...	29.976	76.8	74.8	89	...	3	...	Cum.	
Noon.	NE½E.	4	bc	...	29.974	78.8	76.3	87	...	3	...	Cum.	
2.	NE½E.	4	bc	...	29.956	78.8	76.8	89	...	8	...	Cum.	
4.	NE½E.	3	bc	...	29.952	77.8	75.8	89	...	8	...	Cum.	
6.	NE½E.	2	bc	...	29.967	77.3	75.3	89	...	4	...	Cum.	
8.	NE½E.	2	bc	...	29.967	75.8	74.0	90	...	4	...	Cum.	
10.	NE½E.	2	bc	...	29.971	76.3	74.8	91	...	7	...	Cum.	
Midd.	NE½E.	3	bc	...	29.960	74.8	73.8	94	...	5	...	Cum.	
Totals.	...	45	bcq	...	11545	74.8	53.0	118	...	62	...	Cum.	
Mean.	N. E.	4		...	29.962	76.2	74.4	89	...	5	...	Cum.	

## SATURDAY, 2d.

2.	NE½E.	3	bc	...	29.937	73.8	72.3	91	...	4	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 80° 5, min. 73° 5.
4.	NE½E.	5	bcq	...	29.929	74.3	72.8	91	...	4	...	Cum.	
6.	NE½N.	4	bcq	...	29.931	74.3	72.8	91	...	6	...	Cum.	
8.	NE½E.	3	bcm	...	29.957	75.8	74.3	91	...	8	...	Cum.	
10.	NE½E.	3	bcm	...	29.974	78.8	76.8	90	...	8	...	Cum.	
Noon.	NE½E.	2	bcm	...	29.957	78.8	76.8	90	...	7	...	Cum.	
2.	NE½N.	3	bcm	...	29.921	78.8	75.8	85	...	8	...	Cum.	
4.	NE½E.	2	bcm	...	29.906	78.3	75.8	87	...	9	...	Cum.	
6.	NE½E.	3	bcm	...	29.917	77.3	74.8	87	...	5	...	Cum.	
8.	NE½E.	3	bcm	...	29.945	76.8	75.3	91	...	6	...	Cum.	
10.	NE½E.	1	bcm	...	29.919	75.8	73.8	89	...	5	...	Cum.	
Midd.	NE½E.	1	bcm	...	29.911	75.8	73.8	89	...	6	...	Cum.	
Totals.	...	33	bcqu	...	11204	78.6	55.1	112	...	76	...	Cum.	
Mean.	N. E.	3		...	29.934	76.5	74.6	89	...	6	...	Cum.	

## SUNDAY, 3d.

2.	NE½E.	1	bcm	...	29.911	75.8	73.8	89	...	6	...	Cum.	At St Vincent. Temperature by self-registering thermo- meter, max. 82°, min. 74° 5.
4.	NE½E.	1	bcm	...	29.907	75.8	73.8	89	...	6	...	Cum.	
6.	NNE½E.	2	ocm	...	29.948	75.5	73.8	90	...	10	...	Cum.	
8.	NE½N.	2	bcm	...	29.946	76.3	74.8	91	...	9	...	Cum.	
10.	NE½N.	2	bcm	...	29.949	78.8	76.8	90	...	8	...	Cum.	
Noon.	NE½N.	2	bcm	...	29.949	79.8	77.3	88	...	7	...	Cum.	
2.	NE½N.	2	bcm	...	29.919	80.0	76.3	81	...	7	...	Cum.	
4.	NE½N.	4	bcqm	...	29.880	78.8	76.3	88	...	2	...	Cum.	
6.	NE½E.	3	bcm	...	29.907	76.8	75.0	90	...	2	...	Cum str.	
8.	NE½E.	3	bcm	...	29.914	75.8	71.8	79	...	5	...	Cum.	
10.	NE½E.	2	bcm	...	29.952	75.8	70.0	72	...	4	...	Cum.	
Midd.	NE½E.	1	bcm	...	29.970	76.0	70.8	74	...	3	...	Cum.	
Totals.	...	25	bcm	...	11152	85.2	50.5	61	...	69	...	Cum.	
Mean.	N. E.	2		...	29.929	77.1	74.2	85	...	6	...	Cum.	

## MONDAY, 4TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 6.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE½E.	2	bc	...	29.958	75.8	70.8	75	...	3	...	Cum.	At St Vincent. Temperature by self-registering thermometer, max. 86°, min. 74° 2°.
4.	NE½E.	2	bc	...	29.923	74.8	70.8	79	...	3	...	Cum.	
6.	NE½E.	2	bc	...	29.953	74.8	70.8	79	...	6	...	Cum str.	
8.	NE½E.	1	bc	...	29.967	77.6	71.8	75.5	...	6	...	Cum str.	
10.	NE½E.	1	bc	...	29.966	80.0	74.3	75.5	...	6	...	Cum str.	
Noon.	NE½E.	1	bc	...	29.962	83.3	74.8	63	...	10	...	Cum str.	
2.	NE½E.	1	bc	...	29.930	79.8	74.8	75	...	9	...	Cum str.	
4.	NE½E.	1	bc	...	29.919	81.3	72.8	63	...	8	...	Cum str.	
6.	NE½E.	1	bcm	...	29.938	77.8	71.3	69	...	1	...	Cum.	
8.	NE½E.	1	bc	...	29.941	77.3	72.8	71	...	1	...	Cum.	
10.	NE½E.	1	bc	...	29.966	76.8	70.8	71	...	4	...	Cum.	
Midd.	NE½E.	1	bc	...	29.976	76.8	71.8	75	...	4	...	Cum.	
Totals.	...	15	bc	...	11399	96.1	27.6	30	...	61	...	Cum. & Cum str.	
Mean.	NE½E.	1	...	...	29.950	78.0	72.3	72	...	5	...	Cum str.	

## TUESDAY, 5TH.

2.	NE½E.	1	bc	...	29.954	75.8	70.8	75	...	3	...	Cum.	At noon, lat. 16° 55' N. long. 25° 2' W. Temperature by self-registering thermometer, max. 83°, min. 74° 5°. 10 A.M., left St Vincent for Porto Praya.
4.	E½N.	2	bc	...	29.965	75.8	71.3	77	...	4	...	Cum.	
6.	E½S.	1	cm	...	29.982	75.8	71.8	79	...	10	...	Cum.	
8.	NE½E.	2	cm	...	30.011	77.8	72.8	75	...	10	...	Cum.	
10.	NE½E.	1	bcm	...	30.002	81.3	75.8	64	...	7	...	Cir.	
Noon.	NE½E.	3	bcm	...	30.009	81.3	74.8	70	...	5	...	Cir.	
2.	NE½E.	2	bcm	...	29.976	78.8	74.8	80	...	3	...	Cir.	
4.	NE½E.	2	bcm	...	29.986	78.8	74.8	80	...	4	...	Str.	
6.	Calms.	0	bcm	...	29.952	79.8	74.8	75	78.2	7	...	Cum.	
8.	E½S.	1	bcm	...	29.966	78.8	74.8	80	78.0	4	...	Str.	
10.	E½N.	2	bed	1	30.010	77.8	74.0	80	77.5	4	Cir str.	Cum.	10 P.M., upper clouds from south.
Midd.	E½S.	3	bed	1	29.991	77.3	73.5	81	77.5	7	...	Cum.	
Totals.	...	20	bcm	2	11804	99.6	42.0	76	39.2	68	...	Cir str.	Cum.
Mean.	E.N.E.	2	1	...	29.984	78.3	73.5	76	77.8	6	...	Cum.	

## WEDNESDAY, 6TH.

2.	NE½E.	2	bc	1	29.998	75.8	73.8	89	77.5	6	Str.	Cum.	At noon, lat. 15° 43' N. long. 24° 15' W. Temperature by self-registering thermometer, max. 80° 5, min. 75° 5. Current, s. 11 miles.
4.	NE½E.	4	bc	1	29.983	76.8	73.8	84	77.7	4	Str.	Cum.	
6.	E½N.	1	bc	1	29.931	75.8	74.3	91	77.5	7	...	Cum str.	
8.	NE½E.	3	bc	1	29.955	77.3	74.8	87	77.5	5	...	Cum str.	
10.	NE½E.	2	bc	1	29.966	79.8	75.5	79	78	5	...	Cum str.	
Noon.	NE½E.	3	bc	1	29.949	78.8	75.8	80	78	7	Cir.	Cum str.	
2.	NE½E.	3	bc	1	29.939	79.3	74.8	78	77.5	5	Cir.	Cum str.	
4.	NE½E.	3	bc	1	29.963	79.3	75.8	83	77.5	8	Cir str.	Cum str.	
6.	NE½E.	3	bc	1	29.891	76.8	74.8	89	78	5	Str.	Cum.	
8.	NE½E.	2	bc	1	29.879	76.8	75.8	94	78	8	...	Cum.	
10.	NE½E.	2	c	1	29.944	76.8	74.3	87	78	10	...	Cum str.	Clouds from S.S.E.
Midd.	NE½N.	3	c	1	29.939	77.0	72.8	78	78	10	...	C str. & Nb.	
Totals.	...	31	bc	12	11277	91.3	56.3	1019	93.2	80	...	Cir str.	Cum. & Cum str.
Mean.	NE½E.	3	1	...	29.939	77.6	74.7	85	77.8	7	...	Cum str.	

## THURSDAY, 7TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NbE.	2	c	...	29.863	77.3	72.3	75	78	10	...	Cum str.	At Porto Praya. Temperature by self-registering thermometer, max. 82°, min. 74°. 7.30 A.M., anchored at Porto Praya.
4.	N $\frac{1}{2}$ E.	4	cp	...	29.867	76.8	72.8	79	...	10	...	Cm. & Nb.	
6.	N.	5	cp	...	29.874	74.8	73.3	91	...	10	...	Cum str.	
8.	NbW $\frac{1}{2}$ W.	3	bcp	...	29.901	76.8	73.8	84	78	8	...	Cum str.	
10.	NNE $\frac{1}{2}$ E.	5	c	...	29.904	79.8	74.8	75	78	10	Cir.	Cum.	
Noon.	NNE $\frac{1}{2}$ E.	4	c	...	29.876	79.8	74.3	73	78	10	...	Cum.	
2.	N.N.E.	4	eq	...	29.859	79.8	74.0	72	...	10	...	Cum str.	
4.	NNE $\frac{1}{2}$ E.	4	eq	...	29.846	79.8	72.8	67	...	10	...	Cum str.	
6.	NNE $\frac{1}{2}$ E.	3	beq	...	29.845	78.8	71.3	65	...	9	...	Cum str.	
8.	NE $\frac{1}{2}$ E.	1	bc	...	29.869	77.8	71.8	71	...	6	...	Cum.	
10.	NNE $\frac{1}{2}$ E.	1	bc	...	29.904	77.8	72.3	73	...	8	...	Cum.	Slight swell from SE.
Midt.	NNE $\frac{1}{2}$ E.	1	bc	...	29.914	77.0	72.8	78	...	8	...	Cum.	
Totals.	...	37	cp & bc	...	10522	96.3	36.3	903	32	109	Cir.	Cum. & Cum str.	
Mean.	N.N.E.	3	bc	...	29.877	78.0	73.0	75	78	9			

## FRIDAY, 8TH.

2.	NNE $\frac{1}{2}$ E.	1	bc	...	29.873	76.8	71.3	73	...	7	Cir.	Cum str.	At Porto Praya. Temperature by self-registering thermometer, max. 81°, min. 75° 5.
4.	NE $\frac{1}{2}$ E.	2	bc	...	29.887	75.8	73.3	86	...	8	Cir.	Cum str.	
6.	NE $\frac{1}{2}$ E.	1	bc	...	29.906	76.3	73.5	86	...	9	...	Cum str.	
8.	NE $\frac{1}{2}$ E.	2	bc	...	29.912	78.3	75.3	84	...	9	...	Cum.	
10.	NE $\frac{1}{2}$ E.	1	cp	...	29.951	78.8	76.8	90	...	10	Cir.	Cum.	
Noon.	NbE $\frac{1}{2}$ E.	0	cm	...	29.949	80.3	77.3	85	...	10	Cir.	Cum.	
2.	NE $\frac{1}{2}$ E.	1	bcp	...	29.918	79.8	76.8	85	...	8	Cir.	Cum.	
4.	NE $\frac{1}{2}$ E.	2	bc	...	29.912	79.8	75.8	80	...	10	Cir.	Cum.	
6.	NE $\frac{1}{2}$ E.	1	bc	...	29.919	77.8	75.3	86	...	10	Cir str.	Nimb.	
8.	NE $\frac{1}{2}$ E.	1	bcp	...	29.944	77.8	75.3	86	...	8	Cir.	Cm. & Nb.	
10.	NE $\frac{1}{2}$ E.	1	bc	...	29.966	78.3	75.8	87	...	9	...	Cm. & Nb.	
Midt.	NE $\frac{1}{2}$ E.	1	bc	...	29.946	77.3	74.8	87	...	10	...	Cm. & Nb.	
Totals.	...	14	bc	...	11083	97.1	61.3	55	...	108	Cir.	Cum., Cum str., & Nimb.	
Mean.	NE $\frac{1}{2}$ E.	1		...	29.924	78.1	75.1	85	...	9			

## SATURDAY, 9TH.

2.	NbE $\frac{1}{2}$ E.	1	bc	...	29.923	76.8	74.8	89	...	9	...	Cm. & Nb.	At Porto Praya. Temperature by self-registering thermometer, max. 83° 5, min. 75°.
4.	N.N.W.	1	bc	...	29.921	75.8	73.8	89	...	4	...	Cum.	
6.	N.	1	bc	...	29.949	74.8	73.3	91	...	3	Cir.	Cum str.	
8.	S.W.	1	bc	...	30.001	76.3	74.8	91	...	6	Cir str.	Cum.	
10.	Calu.	0	bc	...	30.008	78.8	75.8	85	...	7	Cir str.	Cum.	
Noon.	Calu.	0	bc	...	30.009	79.8	76.3	82	...	8	Cir str.	Cum.	
2.	S.S.E.	1	bc	...	29.961	81.8	76.8	77	...	9	Cir.	Cum str.	
4.	NbE $\frac{1}{2}$ E.	1	bc	...	29.941	81.8	77.3	78	...	8	...	Cum str.	
6.	NE $\frac{1}{2}$ N.	2	c	...	29.952	79.8	76.8	85	...	10	...	Cum str.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	Nb $\frac{1}{2}$ N.	2	bcp	...	29.988	76.8	74.8	89	79.5	8	...	Cum str.	At 8.30 P.M., left Porto Praya for St Paul's rocks.
Midt.	NE $\frac{1}{2}$ E.	2	bc	...	29.991	76.8	74.8	89	79.5	10	...	Cum str.	
Totals.	...	12	bc	...	10644	89.3	59.3	65	...	82	Cir str.	Cum. & Cum str.	
Mean.	Variable.	1		...	29.968	78.1	75.4	86	79.5	7			

## SUNDAY, 10TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer		Humidity, Sat. Def.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>by</sup> E <sup>1</sup> /2 E.	12	bc	1	29.971	76.3	74.8	91	79	9	...	Cm.&cm.st.	At noon, lat. 13° 58' S. long. 23° 5' W. Current, S. 27° W. 7'. Temperature by self-registering thermometer, max. 79.5, min. 75.5.
4.	N <sup>by</sup> E <sup>1</sup> /2 E.	1	bc	12	29.920	76.3	74.8	91	79	9	Cir.	Cum str.	
6.	NNE <sup>1</sup> /2 E.	12	bc	1	29.955	76.8	75.3	91	79	4	Cir.	Cum str.	
8.	NNE <sup>1</sup> /2 E.	12	bc	1	29.988	78.3	75.8	87	78.5	8	...	Cum str.	
10.	N <sup>1</sup> /2 E.	3	c	12	30.000	78.0	74.5	82	79	10	...	Cum str.	Sp. gr. 1.02692.
Noon.	N <sup>1</sup> /2 E.	3	bc	12	29.957	78.0	75.8	88	79.2	9	Cir cum.	Cum.	
2.	NNW <sup>1</sup> /2 W.	3	bc	1	29.896	78.3	75.8	87	79	10	...	Cum str.	Rain came up first in showers, but at 10.30 P.M. commenced steadily.
4.	NNW <sup>1</sup> /2 W.	4	bc	1	29.899	78.3	75.3	84	79	8	...	Cum str.	
6.	N <sup>by</sup> W <sup>1</sup> /2 W.	4	c	1	29.891	77.8	75.3	87	78.5	10	...	Cum str.	
8.	NNE <sup>1</sup> /2 E.	3	bc	1	29.894	76.8	75.8	94	78.5	8	...	Cum str.	
10.	N <sup>by</sup> W <sup>1</sup> /2 W.	4	oc	12	29.950	75.3	73.5	91	78.5	10	...	Nimb.	
Midt.	N <sup>1</sup> /2 W.	2	oc	12	29.936	75.8	71.8	94	79.0	10	...	Nimb.	
Totals.	...	33	ber	17	11257	86.0	61.5	107	106.2	105	Cir.	Cum str. & Nimb.	
Mean.	Northly.	3		1	29.938	77.2	75.1	89	78.9	9			

## MONDAY, 11TH.

2.	N <sup>by</sup> W <sup>1</sup> /2 W.	2	oc	2	29.857	75.3	74.3	94	78	10	...	Nimb.	At noon, lat. 12° 30' S. long. 22° 38' W. Temperature by self-registering thermometer, max. 80°, min. 74°.2. Current, S. 37° W. 16'. 2.5 A.M., wind shifted suddenly to E <sup>by</sup> N with heavy rain.
4.	E.	1	oc	1	29.849	75.3	74.8	97	78.2	10	...	Nimb.	
6.	E.	2	oc	12	29.851	75.8	74.8	94	79	10	...	Cm.&Nlb.	
8.	E <sup>by</sup> N <sup>1</sup> /2 N.	3	bc	12	29.934	75.8	74.8	94	78.7	10	Cir.	Cum str.	
10.	E <sup>by</sup> N <sup>1</sup> /2 N.	1	bc	1	29.941	77.8	75.8	89	79.2	7	Str.	Cum.	Sp. gr. 1.02663.
Noon.	S <sup>1</sup> /2 W.	2	bc	12	29.934	77.8	77.3	97	79.2	5	Str.	Cum.	
2.	S <sup>1</sup> /2 E.	3	bc	12	29.897	77.8	75.3	87	79	7	Cir str.	Cum.	2 P.M., upper clouds from E.S.E. 6 P.M., a double rainbow to southwest.
4.	S <sup>1</sup> /2 E.	5	cpq	12	29.889	77.8	74.8	84	78.7	10	...	Cm.&Nlb.	
6.	S <sup>1</sup> /2 W.	5	bc	12	29.907	77.8	74.8	84	78	9	...	Cm.&Nlb.	
8.	SSW <sup>1</sup> /2 W.	5	bcq	12	29.947	77.8	74.8	84	78.5	9	Cir.	Cm.&Nlb.	
10.	SSW <sup>1</sup> /2 W.	5	bc	3	29.965	77.8	75.8	89	78.7	7	...	Cum str.	
Midt.	SSW <sup>1</sup> /2 W.	4	ocm	12	29.965	78.8	74.8	80	78.2	6	...	Cum.	
Totals.	...	38	oc & bcq	21	10936	85.6	62.1	113	103.4	100	Cir str.	Cum. & Nimb.	
Mean.	Variable.	3		2	29.911	77.1	75.2	89	78.6	8			

## TUESDAY, 12TH.

2.	S <sup>1</sup> /2 W.	2	bc	2	29.979	77.0	74.3	86	78.5	8	Cir str.	Cum str.	At noon, lat. 11° 59' S. long. 21° 12' W. Temperature by self-registering thermometer, max. 82° 6', min. 75°. Current, S. 35° E. 33'. 1 A.M., sand flying over rapidly.
4.	S <sup>by</sup> W <sup>1</sup> /2 W.	3	bc	2	29.969	77.0	73.8	83	78.2	10	Cir str.	Str.	
6.	S <sup>1</sup> /2 W.	3	bcu	1	29.983	77.8	74.8	84	78.2	9	...	Cum str.	
8.	S <sup>1</sup> /2 W.	3	bc	1	30.008	77.8	74.8	84	78.0	7	Cir.	Cum str.	
10.	S <sup>1</sup> /2 W.	2	bc	1	30.050	78.8	75.3	82	78.5	7	Cir.	Cum str.	Sp. gr. 1.02692
Noon.	S <sup>1</sup> /2 W.	2	bc	1	30.007	79.3	75.3	80	79.0	7	Cir str.	Cum.	
2.	SW <sup>1</sup> /2 S.	2	bc	1	30.017	78.8	74.8	80	79.5	6	Cir.	Cum.	
4.	SW <sup>1</sup> /2 S.	2	bc	1	30.002	78.8	74.8	80	79.0	4	Cir.	Cum str.	
6.	WS <sup>1</sup> /2 S.	1	bc	1	30.042	79.8	75.3	77	78.7	4	Cir str.	Cum.	
8.	S <sup>1</sup> /2 W.	1	bc	1	30.049	78.3	74.3	79	79.0	5	Cir.	Cum.	
10.	S <sup>1</sup> /2 W.	2	bc	1	30.057	79.3	74.8	78	78.7	4	Cir.	Cum.	
Midt.	S <sup>1</sup> /2 W.	2	bc	1	30.059	77.8	74.8	84	78.2	4	Cir.	Cum.	
Totals.	...	25	bc	14	222	100.5	57.1	17	75	75	Cir str.	Cum. & Str.	
Mean.	S.S.W.	2		1	30.018	78.4	74.8	81	78.6	6			

## WEDNESDAY, 13TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w.	3	bc	2	29.997	76.8	74.8	89	78	4	...	Cum.	At noon, lat. 10° 25' S. long. 20° 30' W. Temperature by self-registering thermo- meter, max. 82° 2', min. 76° 2'. Current, s. 67° E. 26'. 8 A.M., swell from sw <sup>bs</sup> .
4.	s.w.	12	bc	2	30.003	76.8	75.8	94	78	5	Cir.	Cum.	
6.	w.s.w.	1	bc	1	30.047	77.3	74.0	83	78	3	Cir.	Cum str.	
8.	w.bs.	3	bcp	2	30.080	76.8	74.3	86	78	3	Cir str.	Cum.&Nb.	
10.	w.s.w.	2	bc	1	30.062	78.8	74.8	80	78	2	...	Cum.&Nb.	
Noon.	w.	12	bc	1	30.043	81.3	76.8	78	78.2	3	Cir.	Cum str.	
2.	w.bs.s.	12	bc	1	30.066	79.3	75.8	83	78.5	3	Cir.	Cum str.	
4.	w.s.	3	bc	1	29.996	79.3	74.8	78	78.2	6	Cir.	Cum.	
6.	w.bs.s.	3	bc	1	30.013	77.8	74.3	81	78	2	Cir str.	Cum str.	
8.	w.bs.s.	3	bc	1	30.037	78.3	74.5	80	78	3	Cir.	Cum str.	
10.	sw <sup>bs</sup> w	3	bc	1	30.065	77.8	73.8	79	78	4	Cir.	Str.	
Midd.	w.bs.s.	3	bcp	1	30.048	77.8	74.3	82	78	5	Str.	Cum.	
Totals.	...	30	bcp	15	397	98.1	58.0	33	11	66	Cir str.	Cum. & Cum str.	
Mean.	w.s.	2		1	30.033	78.2	74.8	83	78.1	5			

## THURSDAY, 14TH.

2.	w ½ N.	3	bc	2	29.979	77.8	74.0	80	78.2	6	Cir.	Cum.	At noon, lat. 9° 21' S. long. 18° 28' W. Temperature by self-registering thermo- meter, max. 80° 5', min. 76° 0'. Current, s. 32° E. 13'. 9 A.M., upper clouds from east. Noon, heavy squall from west. Sp. gr. 1.02618.
4.	w ½ N.	4	bc	1	29.988	77.8	74.0	80	78	7	Cir.	Cum.	
6.	w ½ N.	3	bc	1	29.998	77.8	73.8	79	78	6	Cir.	Cum str.	
8.	w ½ N.	3	bc	1	29.999	77.8	73.8	79	78	5	Cir.	Cum str.	
10.	sw ¼ W.	4	bc	2	30.037	78.8	75.3	82	78.2	5	Cir.	Cum str.	
Noon.	w.s.w.	5	bcp	2	29.999	79.8	75.8	80	78.5	8	Cir.	Cum.&Nb.	
2.	w.s.w.	4	bcp	2	29.943	79.8	75.3	78	78.5	6	Cir.	Cum.	
4.	w.s.w.	5	bcp	2	29.943	79.0	74.8	79	78.2	7	...	Cum str.	
6.	w.s.w.	4	ocp	2	29.939	76.8	74.8	89	78.2	6	...	Cum.&Nb.	
8.	w.s.w.	5	ocp	2	29.970	74.3	72.3	89	78.0	4	...	Cum.&Nb.	
10.	w.s.w.	4	oc	3	30.009	77.3	73.8	82	78.0	9	...	Nimb.	
Midd.	w.s.w.	6	ocqr	3	29.989	75.3	73.5	90	78.0	10	...	Nimb.	
Totals.	...	50	bcp	23	11793	92.3	51.2	27	18	79	Cir.	Cum., Cum str., & Nimb.	
Mean.	w.s.	4		2	29.983	77.7	74.3	82	78.1	7			

## FRIDAY, 15TH.

2.	w.s.w.	3	bcp	3	29.954	76.8	74.3	87	77.7	8	...	Cum.&Str.	At noon, lat. 8° 25' s. long. 18° 2' w. Current, s. 45° E. 27'. Temperature by self-registering thermo- meter, max. 77° 8', min. 71'.  Sp. gr. 1.02612.  Sea remarkably phosphorescent.
4.	w.s.w.	5	bcp	3	29.948	76.8	73.8	84	78	5	Cir str.	Cum str.	
6.	sw <sup>1</sup> w.	4	cqp	2	29.952	75.8	73.8	89	78.2	10	...	Cum str.	
8.	sw <sup>1</sup> w.	5	ocp	2	29.954	75.8	72.8	84	78	8	...	Cum.&Nb.	
10.	sw <sup>1</sup> w <sup>1</sup> w	4	ocqr	2	30.002	74.8	72.8	89	78	10	...	Cum.	
Noon.	sw <sup>1</sup> w.	3	ocp	3	30.011	76.3	73.3	84	78	10	...	Cum.&Nb.	
2.	Variable.	5	ocqr	4	29.982	70.8	70.8	100	77.7	10	...	Nimb.	
4.	Variable.	4	bcp	4	29.974	76.8	72.8	79	78	9	Cir str.	Cum.&Nb.	
6.	sw <sup>1</sup> w.	5	cqp	3	29.979	76.8	72.8	79	78	9	...	Nb.&Cum.st	
8.	sw <sup>1</sup> w.	4	ocq	3	30.000	76.8	73.0	80	78	9	...	Nimb.	
10.	sw <sup>1</sup> w.	3	bc	3	30.010	77.8	73.8	79	78	8	...	Nimb.	
Midd.	sw <sup>1</sup> w.	4	bc	3	30.038	77.8	73.8	79	78	7	...	Cum.&Nb.	
Totals.	...	49	bcp	35	11804	73.1	37.8	53	95.6	103	Cir str.	Cum. & Nimb.	
Mean.	sw <sup>bs</sup> .	4		3	29.984	76.1	73.1	84	77.9	9			

## SATURDAY, 16th August 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to sea- level and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s <sup>bw</sup> ½ w.	3	bc	12	30.011	75.8	72.3	82	78	5	...	Cm.&Nb.	At noon, lat. 7° 3' S. long. 16° 3' W. Temperature by self-registering thermo- meter, max. 81°, min. 76°. Current, S. 45° E. 28'. 2 A.M., upper clouds stationary. Sp. gr. 1.02625.
4.	s <sup>bw</sup> ½ w.	3	bc	1	30.009	76.8	71.8	75	78	6	Cir cum.	...	
6.	s <sup>bw</sup> ½ w.	3	bc	1	30.007	76.8	71.8	75	78	8	...	Cum str.	
8.	s <sup>bw</sup> ½ w.	3	bc	1	30.052	77.0	72.3	76	78.2	8	...	Cum str.	
10.	s <sup>bw</sup> ½ w.	3	bc	1	30.069	78.0	72.8	74	78.2	5	Cir.	Cum str.	
Noon.	s <sup>bw</sup> ½ w.	3	bc	1	30.059	78.8	72.3	69	79	5	Cir.	Cum str.	
2.	s <sup>bw</sup> ½ w.	3	bc	...	30.034	79.8	74.3	73	79	5	Cir.	Cum str.	
4.	s. s. w.	3	bc	...	30.005	80.3	72.8	65	78.7	6	...	Cum str.	
6.	s. s. w.	12	bc	1	30.009	78.3	72.8	73	78.5	5	...	Cum.	
8.	s <sup>bw</sup> E.	12	bc	1	30.055	77.8	72.8	75	78.5	12	...	Cum.	
10.	s.	12	bc	1	30.061	76.8	71.8	75	78.2	3	...	Cum.	
Midt.	s <sup>bw</sup> E.	12	bc	1	30.041	76.8	71.8	75	78.2	12	...	Cum.	
Totals.	...	32	bc	12	402	93.0	29.6	47	45	60	Cir cum.	Cum. & Cum str.	
Mean.	s <sup>bw</sup> .	3		1	30.034	77.8	72.5	74	78.4	5			

## SUNDAY, 17th.

2.	s.	3	bc	1	29.999	76.8	71.3	73	78.2	2	...	Cum str.	At noon, lat. 6° 44' S. long. 16° 42' W. Temperature by self-registering thermo- meter, max. 79° 2', min. 75° 2'. Current, S. 66° E. 10'. Upper cirrus from E. N. E. Sp. gr. 1.02639.
4.	s.	3	bc	1	29.987	76.3	71.5	76	78.0	2	Cir.	Cir cum.	
6.	s.	12	bc	1	30.004	75.8	71.3	77	78.2	8	Str.	Cum.	
8.	s.	12	bc	1	30.041	77.3	71.8	73	78.2	8	Cir.	Cum.	
10.	s.	3	bc	1	30.047	78.8	72.3	69	78.2	5	Cir.	Cum.	
Noon.	s.	12	bc	1	30.033	78.8	72.3	69	79.0	5	Cir str.	Cum.	
2.	s.	12	bc	1	29.979	77.8	71.3	69	78.7	4	...	Cm&cm str	
4.	s.	3	bc	1	29.964	77.8	71.8	71	79.0	5	...	Cm&cm str	
6.	s.	3	bc	1	29.969	77.8	71.8	71	79.0	5	Cir.	Cum.	
8.	s <sup>bw</sup> ½ w.	12	bc	1	30.019	77.8	71.3	69	78.7	5	...	Cum.	
10.	s <sup>bw</sup> ½ w.	3	bc	1	30.085	75.3	70.3	74	78.7	5	...	Cm.&Nb.	Upper clouds from S. N. E.
Midt.	ssw ½ w.	4	bc	1	30.048	76.8	72.5	78	78.7	5	...	Cm.&Nb.	
Totals.	...	32	bc	12	175	87.1	19.5	29	66	59	Cir str.	Cum. & Cum str.	
Mean.	s.	3		1	30.015	77.3	71.6	72	78.5	5			

## MONDAY, 18th.

2.	s <sup>bw</sup> ½ w.	3	bc	1	29.981	76.8	71.8	75	78.7	5	...	Cum.	At noon, lat. 6° 11' S. long. 15° 57' W. Temperature by self-registering thermo- meter, max. 78° 5', min. 74° 0'. Current, S. 7° E. 17'. Noon, upper clouds from S. N. E. Sp. gr. 1.02647.
4.	s <sup>bw</sup> ½ w.	3	bc	1	29.970	76.8	71.8	75	78.7	5	...	Cum.	
6.	s <sup>bw</sup> ½ w.	4	bc	1	29.999	76.8	71.8	75	78.7	4	Cir str.	Cum str.	
8.	s <sup>bw</sup> ½ w.	4	bc	1	30.021	75.8	71.8	79	78.7	3	Cum str.	Cum str.	
10.	...	...	bc	...	...	...	...	...	78.7	...	...	...	
Noon.	s <sup>bw</sup> ½ w.	5	bc	2	30.018	78.3	71.3	67	79.0	5	Cir str.	Cum.	
2.	s <sup>bw</sup> ½ w.	4	bc	2	29.980	78.3	71.5	68	79.0	6	Cir.	Cum.	
4.	s <sup>bw</sup> ½ w.	5	bc	2	29.967	77.8	71.8	71	78.7	7	Cir str.	Cum.	
6.	s <sup>bw</sup> ½ w.	5	bc	2	29.981	76.8	71.0	72	78.7	4	Cir.	Cum.	
8.	ssw ½ w.	4	bc	2	29.994	76.8	71.3	73	79.0	4	Cir.	Cum.	
10.	s <sup>bw</sup> ½ w.	3	bc	2	30.048	77.8	71.8	71	78.7	4	...	Cum.	
Midt.	s <sup>bw</sup> ½ w.	4	bc	2	30.046	77.3	71.5	72	78.5	6	...	Cum.	
Totals.	...	44	bc	18	005	79.3	17.6	28	91	53	Cir str.	Cum.	
Mean.	s <sup>bw</sup> .	4		2	30.000	77.2	71.6	73	78.8	5			

TUESDAY, 19th AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 6 to 8.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sby 1/2 w.	3	bc	1	29.968	76.8	71.8	75	78.7	8	...	Cum.	At noon, lat. 5° 48' N. long. 14° 26' W. Temperature by self-registering thermo- meter, max. 81° 5', min. 74° 5'. Current, N. 44° E. 59'. 2.10 A.M., heavy rain-squall.
4.	sby 1/2 s.	4	bcp	1	29.958	76.8	71.3	73	78.7	3	...	Cum str.	
6.	sby 1/2 w.	3	bc	1	29.961	77.0	72.0	75	78.7	7	...	Cum str.	
8.	sby 1/2 w.	3	bc	1	29.964	77.0	71.8	73	79.0	6	...	Cum str.	
10.	s.s.w.	3	bc	1	30.029	77.0	72.8	70	79.0	7	...	Cum str.	
Noon.	s.s.w.	3	bc	1	30.052	80.8	74.3	70	79.5	4	Cir str.	Cum.	
2.	s.w.	2	bc	1	30.044	80.3	73.3	67	79.2	8	Cir cum.	...	
4.	swbs.	2	bc	1	29.973	79.8	73.3	69	79.2	6	Cr-strewn	...	
6.	swbs.	3	bcp	1	29.963	78.3	72.8	73	79.0	8	...	Cum.	
8.	swbs.	2	bc	1	30.002	78.8	72.8	71	79.0	6	Str.	Cum.	
10.	s'w.	2	bc	1	30.044	78.8	73.8	75	79.0	4	Str.	Cum.	
Midt.	s.	1	bc	1	30.036	77.8	72.8	75	78.0	4	Str.	Cum.	
Totals.	...	31		12	111	101.5	32.8	26	107.0	71			
Mean.	s.s.w.	3	bcp	1	30.009	78.5	72.7	72	78.9	6	Cir str.	Cum. & Cum str.	

WEDNESDAY, 20th.

2.	s.s.w.	2	bc	2	29.997	76.3	72.3	79	78.5	5	...	Cum. & Nb.	At noon, lat. 4° 29' N. long. 13° 52' W. Temperature by self-registering thermo- meter, max. 83°, min. 73° 5'. Current, N. 86° E. 28'. Sp. gr. 1.02632. 6 P.M., long swell from south.
4.	s.s.w.	2	cp	1	29.991	75.8	70.8	75	78.5	10	...	Cum. & Nb.	
6.	s.s.w.	2	bc	1	30.000	76.8	71.8	75	78.2	9	...	Cum. & Nb.	
8.	s'w.	2	bc	1	30.036	77.8	71.8	71	78.8	8	...	Cum str.	
10.	s'w.	2	bc	1	30.047	79.8	72.3	65	78.7	8	...	Cum.	
Noon.	s'w.	2	bc	1	30.052	81.3	73.8	66	79.0	8	...	Cum.	
2.	s.s.w.	2	bc	1	30.029	81.0	74.3	70	79.0	3	Cir.	Cum.	
4.	s'w.	2	bc	1	29.962	80.8	73.3	66	78.5	3	Cir.	Cum.	
6.	s'w.	2	bc	2	29.984	78.8	72.3	69	78.5	4	Str.	Cum str.	
8.	s'w.	2	bc	1	30.019	76.8	72.5	78	78.2	8	...	Cum.	
10.	s'w.	3	bc	1	30.022	76.8	71.8	75	78.2	6	...	Cum.	
Midt.	s'w.	3	bc	1	30.004	76.3	70.8	73	78.0	7	...	Cum.	
Totals.	sby 1/2 w.	27		15	143	98.3	27.8	862	361	79			
Mean.	sby 1/2 w.	2	bcp	1	30.012	78.2	72.3	76	78.5	7	Cir str.	Cum., Cum str., & Nimb.	

THURSDAY, 21st

2.	s'w.	3	bc	2	30.017	75.8	70.8	75	78	3	Cir.	Cum.	At noon, lat. 3° 8' N. long. 14° 49' W. Temperature by self-registering thermo- meter, max. 79° 2', min. 74°. Current s. 72° W. 9'. Sp. gr. 1.02601.
4.	s'w.	2	oe	2	29.956	75.8	71.8	79	77.5	7	...	Cum.	
6.	s.	3	c	2	30.008	75.0	71.8	83	77.5	10	...	Cum str.	
8.	s.	1	c	2	30.075	75.8	72.3	81	77.7	10	Cir.	Cum.	
10.	s.s.e.	2	bc	2	30.072	77.8	72.8	75	77.7	6	Cir.	Cum.	
Noon.	s'w.	5	bc	2	30.032	77.8	73.0	76	78.0	4	...	Cum. & Str.	
2.	s'w.	4	bc	2	29.994	77.3	72.3	75	77.5	6	Str.	Cum str.	
4.	s'w.	3	bc	2	29.974	77.0	72.3	76	77.0	8	...	Cir cum.	
6.	s'w.	3	bc	2	30.055	76.3	72.3	79	77.0	8	...	Cum.	
8.	s'w.	3	bc	2	30.033	75.5	71.3	78	77.5	8	...	Cum str.	
10.	s'w.	3	bc	1	30.063	74.8	71.8	84	75.0	9	Str.	Cum.	
Midt.	s'w.	3	bc	1	30.057	74.8	71.8	84	76.5	8	...	Str.	
Totals.	...	35		22	336	73.7	24.3	105	86.9	87			
Mean.	s'w.	3		2	30.028	76.1	72.0	79	77.2	7	Cir str.	Cum. & Cum str.	

## FRIDAY, August 22d 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 100.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
2.	s <sup>b</sup> E.	4	bc	12	29.979	74.8	71.0	80	77	6	...	Cum.		At noon, lat. 2° 49' N. long. 17° 13' W. Temperature by self-registering thermometer, max. 78° 8', min. 73° 5'. Current, N. 38°, W. 23'. Sp. gr. 1.02601. Wind travelling at the rate of from 16 to 20 miles per hour by anemometer. ...
4.	s <sup>b</sup> E.	5	bc	12	29.979	74.8	70.8	79	77	6	...	Cum.		
6.	s.s.e.	4	bc	1	30.046	74.8	70.8	79	77	7	Str.	Cum.		
8.	s.s.e.	3	bc	1	30.064	75.8	71.3	77	77	6	Cir.	Cum str.		
10.	s.e.	4	bcm	12	30.075	76.8	71.8	75	78.2	1	...	Str.		
Noon.	s.s.e.	6	bm	12	30.046	77.8	72.8	75	78.5	0	...	...		
2.	s.s.e.	5	bcm	1	30.033	76.8	72.3	77	78	1	...	Cum.		
4.	s.s.e.	5	bcm	1	30.012	76.3	71.8	77	78	3	...	Cum str.		
6.	s <sup>b</sup> E.	4	bc	1	30.022	76.3	71.8	77	78	3	...	Cum str.		
8.	s <sup>b</sup> E.	3	b	1	30.030	76.3	71.8	77	77.7	0	...	...		
10.	s <sup>b</sup> E.	4	bc	12	30.092	75.8	71.8	79	77.7	1	...	Cum.		
Midt.	s <sup>b</sup> E.	4	bc	12	30.095	75.8	71.8	79	77.5	3	...	Cum.		
Totals.	...	51		18	473	72.1	19.8	91	91.6	37				
Mean.	s <sup>b</sup> E $\frac{1}{2}$ E.	4	bcqm	1	30.039	76.0	71.6	78	77.6	3		Cir str.	Cum. & Cum str.	

## SATURDAY 23d.

2.	s <sup>b</sup> E.	4	bcm	1	30.053	75.3	70.8	77	77.8	5	...	Cum.		At noon, lat. 2° 25' N. long. 20° 1' W. Temperature by self-registering thermometer, max. 80°, min. 74°. Current, N. 75°, W. 20'. Sp. gr. 1.02613.
4.	s <sup>b</sup> E.	3	bcm	1	30.047	75.3	70.8	77	77.8	4	...	Cum.		
6.	s.s.e.	4	bc	1	30.042	74.8	71.8	84	77.7	3	Cir str.	Cum.		
8.	s <sup>b</sup> E.	3	bc	1	30.072	76.0	70.8	74	77.7	3	...	Cm. & cum. str.		
10.	s <sup>b</sup> E.	4	bc	1	30.090	78.3	72.3	71	77.2	4	Cir.	Cum str.		
Noon.	s <sup>b</sup> E.	4	bc	1	30.055	78.3	73.3	75	77.2	4	Cir.	Cum str.		
2.	s <sup>b</sup> E $\frac{1}{2}$ E.	3	bcm	1	30.020	78.8	71.8	69	78.2	5	...	Cum.		
4.	s.s.e.	2	bcm	1	29.993	77.8	71.8	71	78.2	4	...	Cum.		
6.	s.s.e.	3	bc	...	30.021	76.5	70.5	71	78.0	2	...	Sm. cum.		
8.	s <sup>b</sup> E.	4	bc	1	30.023	76.5	71.3	74	78.2	1	...	Cum.		
10.	s <sup>b</sup> E.	3	bc	1	30.050	76.3	71.0	74	78.0	1	...	Cum.		
Midt.	s <sup>b</sup> E.	4	bc	...	30.052	75.8	70.8	75	78.0	1	...	Cum.		
Totals.	...	41		10	518	79.7	17.0	52	94.0	37				
Mean.	s <sup>b</sup> E.	3	bcm	1	30.043	76.6	71.4	74	77.8	3		Cir str.	Cum. & Cum str.	

## SUNDAY, 24th.

2.	s <sup>b</sup> E.	4	bc	1	30.016	75.3	70.8	77	77.5	1	...	Cum.		At noon, lat. 2° 13' N. long. 22° 21' W. Temperature by self-registering thermometer, max. 78°, min. 73° 5'. Current, N. 45° W. 17'. Observed four or five meteors during the middle watch. Sp. gr. 1.02617.
4.	s <sup>b</sup> E.	3	bc	1	30.022	75.0	70.3	76	77.5	3	...	Cum.		
6.	s <sup>b</sup> E.	4	bc	1	30.014	74.8	69.8	74	77.7	2	Cir.	Sm. cum.		
8.	s <sup>b</sup> E.	3	bc	1	30.043	75.8	70.8	75	78	5	Cir.	Cum.		
10.	s <sup>b</sup> E.	4	bc	1	30.055	76.8	71.3	73	78	7	Cir.	Cum.		
Noon.	s <sup>b</sup> E.	4	bc	1	30.040	77.5	71.3	70	78.5	6	Cir.	Cum str.		
2.	s <sup>b</sup> E.	3	bc	1	30.007	76.8	71.8	75	78.5	6	Cir cum.	Cum.		
4.	s <sup>b</sup> E.	4	bc	1	29.974	76.8	71.3	73	77.5	6	Cir cum.	Cum.		
6.	s <sup>b</sup> E $\frac{1}{2}$ E.	3	bc	1	29.996	76.8	71.0	72	78.5	4	Str.	Cum.		
8.	s <sup>b</sup> E.s.	2	bc	1	30.034	76.8	71.3	73	78.5	4	...	Cum.		
10.	s.s.e.	3	bc	1	30.032	76.8	70.8	71	78.2	3	...	Cum.		
Midt.	s.s.e.	2	bc	1	30.014	75.8	70.8	75	78.2	2	...	Cum.		
Totals.	...	39		12	247	75.0	11.3	44	96.6	49				
Mean.	s <sup>b</sup> E $\frac{1}{2}$ E.	3	bc	1	30.021	76.2	70.9	74	78.1	4		Cir. & Cir cum.	Cum.	

## MONDAY, 25TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S <sup>b</sup> E.	3	bc	1	29.998	75.8	71.8	79	78.5	3	...	Cum.	At noon, lat. 1° 47' N. long. 24° 26' W. Temperature by self-registering thermo- meter, max. 80°, min. 74°. Current, N. 76° W. 26'.
4.	S <sup>b</sup> E.	3	bc	1	29.998	75.8	70.8	75	78.5	3	...	Cum.	
6.	S. S. E.	3	bc	1	29.994	75.0	70.5	77	78.5	4	...	Cum.	
8.	S <sup>b</sup> E.	3	bc	1	30.035	77.0	71.0	71	78.8	7	Cir cum.	Cum.	Sp. gr. 1.02628.
10.	S <sup>b</sup> E.	3	bc	1	30.044	77.8	71.8	71	78.5	8	...	Cum.	
Noon.	S <sup>b</sup> E.	3	bc	1	30.036	77.8	72.3	73	78.8	8	Cir str.	Cum.	
2.	S <sup>b</sup> E.	3	bc	1	30.019	78.8	72.3	69	79.0	12	...	Cum.	Sp. gr. 1.02628.
4.	S <sup>b</sup> E.	3	bc	1	29.984	77.8	72.0	72	78.7	8	...	Cum.	
6.	S. E.	3	bc	1	30.008	77.3	71.8	75	77.5	8	Cir str.	Cum.	
8.	S <sup>b</sup> E.	2	bc	1	30.010	76.5	71.8	76	78.5	6	...	Cum.	...
10.	S. E.	3	bc	1	30.060	76.5	71.8	76	78.2	4	...	Cum.	
Midt.	S. E.	3	bc	1	30.055	76.3	71.8	77	78.5	5	...	Cum.	
Totals.	...	33	bc	12	211	82.4	19.7	49	60	69	Cir str.	Cum.	
Mean.	S <sup>b</sup> E.	3		1	30.018	76.9	71.6	74	78.5	6			

## TUESDAY, 26TH.

2.	S. E.	2	bc	1	30.021	76.3	71.8	77	78	3	Cir.	Cum.	At noon, lat. 1° 22' N. long. 26° 36' W. Temperature by self-registering thermo- meter, max. 82° 5, min. 74° 5. Current, N. 84° W. 26'.
4.	S. E.	3	bc	1	29.999	76.0	71.8	78	78	3	...	Cum.	
6.	S. E.	3	bc	1	30.023	75.8	71.8	79	78	4	Cir str.	Cum.	
8.	S. E.	3	bc	1	30.035	77.8	72.8	75	78.5	3	...	Cum.	Sp. gr. 1.02626.
10.	S. E.	3	bc	1	30.046	80.3	72.8	69	78.5	2	...	Cum.	
Noon.	S <sup>b</sup> E.	4	bc	2	30.070	78.3	72.3	71	78.5	5	...	Cum.	
2.	S <sup>b</sup> E.	3	bc	1	30.032	78.8	72.3	69	79.7	6	...	Cum.	...
4.	S <sup>b</sup> E.	3	bc	1	30.026	79.3	73.3	71	78.7	5	...	Cum.	
6.	S <sup>b</sup> E.	3	bc	...	30.017	77.8	71.8	71	77.5	1	...	Cum.	
8.	S <sup>b</sup> E.	3	...	...	30.037	75.8	70.8	75	78.0	...	Cir.	Cum.	...
10.	S <sup>b</sup> E.	3	bc	1	30.070	76.8	71.8	75	78.5	2	...	Cum.	
Midt.	S <sup>b</sup> E.	2	bc	1	30.080	76.3	71.3	75	78.0	3	...	Cum.	
Totals.	...	35	bc	11	456	89.3	24.6	45	39	37	Cir str.	Cum.	
Mean.	S <sup>b</sup> E.	3		1	30.038	77.4	72.0	74	78.3	3			

## WEDNESDAY, 27TH.

2.	S <sup>b</sup> E.	3	bc	1	30.040	76.3	70.8	73	78.0	4	...	Cum.	At noon, lat. 1° 7' N. long. 28° 48' W. Temperature by self-registering thermo- meter, max. 81°, min. 75°. Current, N. 79° W. 39'.
4.	S <sup>b</sup> E.	2	bc	1	30.036	75.8	70.5	74	78.0	2	...	Cum.	
6.	S <sup>b</sup> E.	2	bc	1	30.025	75.8	70.8	75	78.0	4	...	Cum.	
8.	S <sup>b</sup> E.	2	bc	1	30.073	79.8	71.8	63	78.7	4	Cir.	Cum.	Sp. gr. 1.02651.
10.	S <sup>b</sup> E.	3	bc	1	30.062	79.8	73.3	69	78.0	2	Cir.	Cum.	
Noon.	S <sup>b</sup> E.	3	b	1	30.038	80.0	73.8	70	78.0	0	...	Cum.	
2.	S <sup>b</sup> E.	3	bc	1	30.022	77.8	72.3	73	77.5	1	...	Cum.	5 P.M., secured ship with a hawser to the N.E. point of St Paul's rocks.
4.	S <sup>b</sup> E.	2	bc	1	29.999	77.8	72.5	74	77.7	3	...	Cum.	
6.	S <sup>b</sup> E.	2	bc	1	30.007	77.8	72.3	73	77.7	2	...	Cum.	
8.	S <sup>b</sup> E.	2	bc	1	30.019	76.8	71.8	75	77.2	3	...	Cum.	...
10.	S <sup>b</sup> E.	2	bc	1	30.029	76.8	71.8	75	77.0	2	...	Cum.	
Midt.	S <sup>b</sup> E.	2	bc	1	30.047	76.8	72.3	77	76.0	2	...	Cum.	
Totals.	...	28	bc	12	397	91.3	24.0	31	91.8	29	Cir.	Cum.	
Mean.	S <sup>b</sup> E.	2		1	30.033	77.6	72.0	73	77.6	2			

## THURSDAY, 28TH AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometre reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE by E.	3	bc	2	30.040	75.8	71.8	79	...	8	...	Cum.	At St Paul's rocks. Temperature by self-registering thermo- meter, max. 83° 2, min. 75° 1.
4.	S. E.	2	bc	2	30.040	75.8	71.8	79	...	8	...	Cum.	
6.	S. E.	2	bc	2	30.047	75.8	71.8	79	76	7	Cir.	Cum.	
8.	S. E.	2	bc	2	30.055	77.8	72.8	75	...	8	...	Cum.	
10.	SE by E.	2	bc	1	30.066	81.0	74.8	73	77.2	6	Cir.	Cum.	
Noon.	SE by E.	2	bc	1	30.052	81.0	74.8	73	77.2	6	Cir.	Cum.	
2.	SE by E.	2	bc	...	30.054	81.3	75.3	72	77.5	6	Cir.	Cum.	
4.	SE by E.	2	bc	...	30.044	81.3	75.3	72	...	6	Cir.	Cum.	
6.	SE by E.	2	...	...	30.032	78.8	73.8	75	...	...	...	...	
8.	SE by E.	2	bc	...	30.052	78.3	73.8	77	...	9	Cir.	Cum.	
10.	SE by E.	2	bc	...	30.064	77.8	73.5	78	...	7	Cir.	Cum.	
Midt.	SE by E.	2	bc	...	30.045	77.8	73.8	79	...	6	...	Cum.	
Totals.	...	25	bc	10	591	102.5	43.3	71	27.9	77	Cir.	Cum.	
Mean.	SE by E.	2		2	30.049	78.5	73.6	76	77.0	7			

## FRIDAY, 29TH.

2.	SE by E.	2	bc	...	30.024	77.8	73.8	79	77.0	5	...	Cum.	At St Paul's rocks. Temperature by self-registering thermo- meter, max. 82° 5, min. 75° 2.
4.	SE by E.	2	bc	...	30.017	77.8	73.3	77	77.0	5	...	Cum.	
6.	S. E.	2	bc	...	30.026	76.8	72.8	79	...	6	Cir.	Cum.	
8.	S. E.	...	...	...	...	...	...	...	...	...	...	...	At 7 A.M., cast off from St Paul's rocks and steamed round them until 6 P.M., when we left for Fernando Noronha. 8 P.M., upper clouds stationary.
10.	S. E.	...	bc	...	30.045	78.8	73.8	75	78.0	5	Cir.	Cum.	
Noon.	SE by E.	3	bc	...	30.053	78.5	73.8	76	78.0	6	Cir.	Cum.	
2.	SE by E.	3	bc	...	30.019	78.8	73.8	75	76.7	5	Cir.	Cum.	
4.	SE by E.	3	bc	...	29.997	78.8	73.8	75	76.5	5	Cir.	Cum.	
6.	SE by E.	3	bc	...	30.020	78.8	74.3	77	77.0	3	Str.	Cum.	
8.	SE by E.	3	bc	...	30.046	77.8	72.5	74	77.5	7	Cir.	Cum.	
10.	SE by E.	3	bc	...	30.056	78.8	73.3	79	77.5	5	Cir cum.	Cum.	
Midt.	SE by E.	3	bc	...	30.038	77.8	72.8	79	77.5	4	...	Cum.	
Totals.	...	26	bc	...	341	90.5	38.0	75	72.7	56	Cir.	Cum.	
Mean.	S. E.	2		...	30.031	77.5	73.5	77	77.3	5			

## SATURDAY, 30TH.

2.	SE by E.	2	bc	1	30.008	76.3	72.8	82	77.2	7	...	Cum.	At noon, lat. 0° 4' S. long. 30° 20' w. Temperature by self-registering thermo- meter, max. 81, min. 74 °5. Current, S. 69° w. 29°.	
4.	SE by E.	3	bc	1	30.006	76.3	72.8	82	77.2	4	...	Cum.		
6.	SE by E.	2	bc	1	30.033	75.8	72.0	80	77.5	6	Cir.	Cum.		
8.	SE by E.	2	bc	...	30.062	77.8	73.8	79	77.5	5	...	Cum.		
10.	E. S. E.	2	bc	1	30.101	79.3	73.8	73	77.7	4	Cir.	Cum.		
Noon.	E. S. E.	3	bc	1	30.087	79.3	73.5	72	78.0	4	Str.	Cum.	Sp. gr. 1.02677.	
2.	Pb by S.	3	bc	1	30.032	77.5	73.3	78	78.0	5	Cir.	Cum.		
4.	Pb by S.	3	bc	1	30.025	77.8	72.8	75	77.7	5	Cir.	Cum.		
6.	Pb by S.	2	bc	1	30.044	77.0	72.8	78	77.5	4	Str.	Cum.		
8.	Pb by S.	3	...	...	30.058	76.8	72.8	79	77.5	...	Str.	Cum.		
10.	Pb by S.	2	bc	1	30.102	76.8	72.8	79	77.7	3	Cir cum.	...		
Midt.	Pb by S.	2	bc	1	30.102	76.8	72.8	79	77.5	3	...	Cum.		
Totals.	...	29	bc	10	660	87.5	36.0	96	70	50	Cir str.	Cum.		
Mean.	E. S. E.	2		1	30.055	77.3	73.0	78	77.6	5				

## SUNDAY, 31st AUGUST 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>b</sup> S <sup>s</sup> S.	12	bc	1	30·066	75·8	72·8	84	77·5	4	...	Cum.	At noon, lat. 2° 6' s. long. 31° 4' w. Temperature by self-registering thermo- meter, max. 81°·5, min. 75°·0. Current, s. 55' w. 25'.
4.	E <sup>b</sup> S <sup>s</sup> S.	3	bc	1	30·052	76·3	72·8	82	77·7	3	...	Cum.	
6.	E. S. E.	3	bc	1	30·055	75·8	72·3	81	77·5	2	...	Cum.	
8.	E <sup>b</sup> S <sup>s</sup> S.	12	...	...	30·088	76·3	73·9	82	77·7	...	...	Cum.	Sp. gr. 1·02692.
10.	E <sup>b</sup> S <sup>s</sup> S.	12	bc	1	30·080	79·8	74·8	75	78·0	1	Cir.	Cum.	
Noon.	E <sup>b</sup> S <sup>s</sup> S.	12	bc	1	30·064	80·8	73·3	66	78·2	2	Cir.	Cum.	
2.	E <sup>b</sup> S <sup>s</sup> S.	12	bc	1	30·067	79·3	74·3	75	78·0	4	...	Cum.	
4.	E <sup>b</sup> S <sup>s</sup> S.	3	bc	1	30·053	79·5	74·0	73	78·0	5	...	Cum.	
6.	E <sup>b</sup> S <sup>s</sup> S.	3	bc	1	30·048	78·8	74·3	78	78·0	6	...	Cum.	
8.	E <sup>b</sup> S <sup>s</sup> E.	4	bc	1	30·060	77·8	74·3	82	78·0	5	...	Cum.	
10.	S <sup>b</sup> E <sup>s</sup> E.	3	ocm	2	30·088	77·8	74·8	84	78·0	6	...	Cum.	
Midt.	S <sup>b</sup> E <sup>s</sup> E.	4	ocip	2	30·088	77·3	73·8	82	78·0	6	...	Cum.	
Totals.	...	33	bcmp	13	809	95·3	44·5	944	93·9	44	Cir.	Cum.	
Mean.	E. S. E.	3		1	30·067	77·9	73·7	79	77·8	4			

## MONDAY, 1st SEPTEMBER.

2.	S <sup>b</sup> E <sup>s</sup> E.	3	bc	2	30·078	77·0	73·0	79	78	6	...	Cum.	At noon, lat. 3° 41' s. long. 32° 22' w. Temperature by self-registering thermo- meter, max. 82°·5, min. 76°·0. Current, s. 83° w. 27'. Sp. gr. 1·02679. 3 r.m., anchored in San Antonio bay, Fernando Noronha Island.
4.	S <sup>b</sup> E <sup>s</sup> E.	4	bc	3	30·069	77·0	73·0	79	78	7	...	Cum.	
6.	S <sup>b</sup> E <sup>s</sup> E.	3	bc	2	30·081	76·8	72·8	79	78	7	Cir.	Cum.	
8.	E. S. E.	3	bc	2	30·121	78·3	73·3	75	78	5	Cir str.	Cum.	
10.	E. S. E.	3	bc	2	30·089	79·8	73·8	71	78	4	Cir str.	Cum.	
Noon.	S <sup>b</sup> E.	3	bc	2	30·094	78·8	73·8	75	78·5	4	Cir.	Cum.	
2.	S <sup>b</sup> E.	3	bc	1	30·076	80·8	74·8	72	79·0	4	Cir.	Cum.	
4.	S <sup>b</sup> E <sup>s</sup> E.	3	bc	1	30·066	81·3	74·8	70	...	4	Cir.	Cum.	
6.	S <sup>b</sup> E <sup>s</sup> E.	2	bc	1	30·086	79·3	73·3	71	...	4	Str.	Cum.	
8.	S <sup>b</sup> S.	2	bc	1	30·101	78·3	73·3	75	...	4	...	Cum.	
10.	S. E.	2	bc	1	30·115	77·8	72·8	75	...	3	Cir.	Cum.	
Midt.	S <sup>b</sup> S.	3	bc	1	30·050	77·3	72·8	77	...	4	Cir.	Cum.	
Totals.	...	34	bc	19	1026	102·5	41·5	58	57·5	56	Cir str.	Cum.	
Mean.	S <sup>b</sup> E.	3		2	30·085	78·5	73·5	75	78·2	5			

## TUESDAY, 2d.

2.	S <sup>b</sup> S.	2	bc	...	30·059	76·8	72·8	79	...	3	...	Cum.	At Fernando Noronha. Temperature by self-registering thermo- meter, max. 82½°, min. 74°.
4.	S <sup>b</sup> S.	2	bc	...	30·061	76·3	71·8	77	...	3	...	Cum.	
6.	S <sup>b</sup> S.	2	bc	...	30·071	76·3	71·8	77	...	1	...	Sm. cum.	
8.	S <sup>b</sup> S.	2	bc	...	30·096	76·8	72·3	77	...	2	...	Cum.	
10.	S <sup>b</sup> S.	2	bc	...	30·113	80·3	74·8	73	...	2	...	Cum.	
Noon.	S <sup>b</sup> S.	2	bc	...	30·089	80·8	74·8	72	...	2	...	Cum.	
2.	S <sup>b</sup> E.	3	bc	...	30·066	80·8	74·3	70	...	3	Cir.	Cum.	
4.	S <sup>b</sup> E.	3	bc	...	30·059	78·8	73·3	73	...	5	...	Cum.	
6.	S <sup>b</sup> E.	3	cpq	...	30·039	75·8	72·8	84	...	10	...	Cum.	
8.	S <sup>b</sup> E.	3	cp	...	30·071	74·3	71·8	87	...	8	...	Cum.	10.30 p.m., heavy rain squall from south- ward.
10.	S. S. E.	3	ocp	...	30·011	74·8	71·8	84	...	10	...	Cum.	
Midt.	S.	6	ocip	...	29·996	73·3	70·8	87	...	10	...	Cum.	
Totals.	...	33	bcip	...	731	85·1	33·1	100	...	59	Cir.	Cum.	
Mean.	S <sup>b</sup> S.	3		...	30·061	77·1	72·8	78	...	5			

## WEDNESDAY, 3D SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Variable.	6	ocsp	...	30.061	73.3	70.8	87	...	8	...	Cm.&Nb.	At noon, lat. 3° 51' S. long. 32° 31' W. Temperature by self-registering thermometer, max. 80°, min. 71° 5'. 9.30 A.M., left Fernando Noronha for Bahia.
4.	s.e.b.s.	3	ocsp	...	30.017	72.8	70.8	89	...	10	...	Cm.&Nb.	
6.	s.e.	6	bcsp	...	30.030	74.8	71.8	84	...	7	...	Cm.&Nb.	
8.	s.e.b.e.	3	bcsp	...	30.019	76.8	71.8	75	...	3	...	Cm.&Nb.	
10.	s.e.b.s.	3	bcsp	2	30.068	78.8	72.8	71	78.2	8	...	Cm.&Nb.	
Noon.	s.e.b.s.	5	bcsp	4	30.024	75.3	72.5	86	78.8	8	...	Cm.&Nb.	
2.	s.e.	4	bcsp	...	29.994	77.3	73.3	79	78.8	8	...	Cum.	
4.	s.e.	4	bcq	...	29.979	77.8	73.3	77	78.8	8	...	Cum.	
6.	s.e.	4	bc	3	30.007	77.5	72.8	76	...	7	Cir str.	Cum.	
8.	s.e.b.s.	5	bc	2	30.019	76.8	72.8	79	77.7	8	...	Cm.&Nb.	
10.	s.e.b.s.	4	bc	3	30.100	76.8	72.0	76	78.0	7	...	Cm.&tem.st.	
Midt.	s.e.b.e.	5	bcqp	3	30.076	75.3	71.8	82	78.0	9	...	Cm.&Nb.	
Totals.	...	50	bcqp	17	394	73.3	26.5	1	55.9	91	Cir str.	Cum. & Nimb.	
Mean.	s.e.b.s.	4		3	30.033	76.1	72.2	80	78.0	8			

## THURSDAY, 4TH.

2.	s.e.	3	ocqp	2	30.028	75.8	71.8	79	78.0	10	...	Cm.&Nb.	At noon, lat. 5° 1' S. long. 33° 50' W. Temperature by self-registering thermometer, max. 78° 5', min. 73° 5'. Current, N. 75° W. 30°.
4.	s.e.b.s.	4	bc	2	30.061	76.3	71.8	77	78.0	4	Cir.	Cum.	
6.	s.e.b.s.	3	bc	2	30.038	75.8	72.8	79	78.0	3	...	Cum str.	
8.	s.b.s.	4	bcsp	2	30.071	76.8	72.8	79	78.0	6	...	Cum str.	
10.	s.e.b.s.	5	bcsp	2	30.059	75.8	73.8	89	78.2	9	...	Cm.&Nb.	
Noon.	s.e.	2	bcsp	2	30.059	75.3	72.8	87	78.0	9	...	Cm.&Nb.	
2.	s.e.b.s.	3	bcsp	3	30.031	76.3	73.0	83	78.0	10	...	Cm str.&Nb.	
4.	s.e.	3	cpj	3	29.982	76.3	72.8	82	78.0	10	...	Nimb.	
6.	s.e.b.s.	4	cpj	3	30.011	74.5	71.8	85	78.0	9	...	Nimb.	
8.	s.e.s.e.	3	bcsp	2	30.039	75.3	71.3	79	78.0	7	...	Cum.	
10.	s.s.e.e.	4	bcq	3	30.036	76.8	71.8	75	78.0	6	Cir.	Cum.	Sp. gr. 1.02635.
Midt.	s.s.e.e.	5	eq	3	30.026	76.8	71.8	75	78.0	10	...	Cum.	
Totals.	...	43	bcqp	29	381	71.8	27.3	9	2	93	Cir.	Cum. & Nimb.	
Mean.	s.e.b.s.	4		2	30.032	76.0	72.3	81	78.0	8			

## FRIDAY, 5TH.

2.	s.e.b.e.	5	ocp	3	30.059	76.8	72.0	76	77.8	10	...	Cum str.	At noon, lat. 4° 45' S. long. 33° 7' W. Temperature by self-registering thermometer, max. 79°, min. 72° 5'. Current, N. 39° W. 27°. 3.30 A.M., arched squall from the southward, with lightning and rain.
4.	s.e.b.e.	7	bcqp	4	30.011	74.8	71.0	80	78.0	8	...	Cm.&Nb.	
6.	s.e.	5	c	2	30.023	76.0	71.8	78	78.0	10	...	Cum str.	
8.	s.e.	4	bcqp	2	30.024	74.3	71.3	84	78.0	9	...	Cum str.	
10.	s.e.	4	bcq	...	...	78.3	73.8	77	78.0	6	...	Cum str.	
Noon.	s.s.e.e.	4	bc	2	30.049	78.3	72.8	73	78.5	7	Cir.	Cum str.	
2.	s.s.e.	3	bc	2	30.019	77.8	72.8	75	78.5	6	Str.	Cum.	
4.	s.s.e.	5	bc	3	29.986	77.8	73.3	77	78.5	5	Str.	Cum.	
6.	s.s.e.	4	bc	3	30.010	77.3	72.3	75	78	3	Str.	Cum.	
8.	s.s.e.	5	bc	2	30.030	76.8	71.8	75	78	3	...	Cum.	
10.	s.s.e.	4	bc	2	30.068	76.8	72.3	77	78	4	...	Cum.	Sp. gr. 1.02672.
Midt.	s.s.e.	5	bcq	2	30.049	76.8	72.3	77	77.8	6	...	Cum.	
Totals.	...	55	bcqp	28	328	81.8	27.5	84	97.1	79	Cir str.	Cum. & Cum str.	
Mean.	s.s.e.e.	5		2	30.030	76.8	72.3	77	78.1	7			

## SATURDAY, 6TH SEPTEMBER 1873.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.S.E.	5	bc	3	29.980	76.3	71.3	75	77.8	4	Cir.	Cum.	At noon, lat. 5° 54' s. long. 34° 39' w. Temperature by self-registering thermo- meter, max. 80°, min. 74° 8. Current, s. 83° w. 26'.
4.	S.S.E.	4	bc	3	29.978	75.8	70.8	75	77.8	3	...	Cum.	
6.	S.S.E.	5	bc	3	30.001	74.8	70.8	79	78.0	7	...	Str.&Cm.	
8.	S.S.E.	4	bc	3	30.050	77.0	71.0	71	78.0	6	...	Cum.	Sp. gr. 1.02697.
10.	S.S.E.	5	bc	3	30.079	78.5	70.8	65	78.0	3	...	Cum.	
Noon.	S.S.E.	5	bc	3	30.070	77.8	70.3	65	78.0	3	...	Cum.	
2.	S.E.	5	bc	2	29.983	77.3	71.8	73	78.0	5	Str.	Cum.	Sp. gr. 1.02697.
4.	S.E.	4	bc	2	29.955	76.8	70.8	71	77.7	4	...	Cum.	
6.	S.S.E.	5	bc	2	29.985	76.8	70.8	71	78.0	3	...	Sm. cm.	
8.	S.S.E.	5	bc	3	30.031	76.5	70.8	72	77.8	5	...	Cum.	Sp. gr. 1.02697.
10.	S.S.E.	4	bc	3	30.065	76.8	70.8	71	77.8	4	...	Cum.	
Midt.	S.S.E.	5	bc	3	30.045	76.3	71.8	77	77.8	5	...	Cum.	
Totals.	...	56	bc	33	222	80.7	71.8	25	94.7	52	Cir str.	Cum.	
Mean.	S.S.E.	5		3	30.018	76.7	71.0	72	77.9	4			

## SUNDAY, 7TH.

2.	S.S.E.	5	bc	2	29.987	76.3	70.8	73	78.2	5	...	Cum.	At noon, lat. 6° 38' s. long. 34° 33' w. Temperature by self-registering thermo- meter, max. 79°, min. 74° 8. Current, s. 39° w. 27'.
4.	S.S.E.	3	bc	2	29.981	76.8	71.3	73	78.2	5	...	Cum.	
6.	S.E.	4	bc	2	30.005	75.8	70.8	75	77.7	3	Cir.	Str.	
8.	S.E.	5	bc	2	30.019	76.8	70.8	71	...	3	...	Cum.	Sp. gr. 1.02704. 2 P.M., passed some weed remarkably like gulf weed.
10.	S.S.E.	4	bc	2	30.100	78.0	71.8	72	78.0	4	Cir.	Cum.	
Noon.	S.S.E.	4	bc	2	30.095	78.0	71.0	67	78.0	3	Cir.	Cum.	
2.	S.S.E.	4	bc	2	30.021	77.0	70.8	70	78.0	3	Cir.	Cum.	Upper clouds from S.W.
4.	S.S.E.	4	bc	2	29.994	77.3	71.3	71	77.5	3	Cir.	Cum.	
6.	S.E.	4	bc	2	30.009	77.8	71.8	71	77.5	2	...	Cum.	
8.	S.E.	3	bc	1	29.995	76.8	71.8	75	77.5	2	Cir.	Cm.&Str.	Upper clouds from S.W.
10.	S.E.	3	bc	2	30.079	76.8	71.8	75	77.5	6	Cir str.	Cum.	
Midt.	S.E.	3	bc	2	30.068	76.5	72.0	77	77.2	8	...	Cum.	
Totals.	...	46	bc	23	353	83.9	76.0	30	85.3	47	Cir str.	Cum.	
Mean.	S.S.E.	4		2	30.029	77.0	71.3	72	77.8	4			

## MONDAY, 8TH.

2.	S.E.	3	bc	2	30.009	76.8	71.3	73	77.2	7	Cir str.	Cum.	At noon, lat. 7° 39' s. long. 34° 12' w. Temperature by self-registering thermo- meter, max. 80° 5, min. 74° 2. Current, s. 37° w. 26'.
4.	S.E.	3	bc	2	30.001	75.3	70.3	74	77.2	8	...	Cm.&cmst.	
6.	S.E.	2	bc	1	29.980	75.8	71.8	79	77.2	7	Str.	Cum.	
8.	S.E.	2	bc	1	30.023	77.8	72.3	73	77.5	7	Cir.	Cum.	Sp. gr. 1.02760.
10.	S.E.	2	bc	1	30.059	78.8	72.8	71	77.5	5	Cir.	Cum.	
Noon.	S.E.	2	bc	1	30.039	78.8	73.3	73	77.5	7	Str.	Cum.	
2.	S.E.	3	bc	1	30.004	77.8	71.8	71	77.2	4	Cir.	Cum.	Sp. gr. 1.02760.
4.	S.S.E.	4	bc	1	29.995	77.5	71.8	72	77.2	6	Cir str.	Cum.	
6.	S.S.E.	3	bc	1	30.009	76.8	71.8	79	...	8	Cir str.	Cum.	
8.	S.S.E.	2	bc	1	30.039	76.5	70.8	72	77.2	8	Str.	Cum.	Sp. gr. 1.02760.
10.	S.S.E.	3	bc	1	30.039	76.3	72.3	79	77.0	3	Str.	Cum.	
Midt.	S.S.E.	2	bc	1	30.055	75.8	72.3	81	77.5	2	Cir.	Cum.	
Totals.	...	31	bc	14	252	84.0	72.6	57	32	72	Cir str.	Cum.	
Mean.	S.E.	3		1	30.021	77.0	71.9	75	77.3	6			

## TUESDAY, 9TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea-surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	S.E.	2	bc	2	30.024	75.8	70.5	74	77.0	1	Cir.	Cum.	At noon, lat. 8° 33' s. long. 34° 30' w. Temperature by self-registering thermo- meter, max. 81°, min. 74°. Current, S. 19° w. 24'.  Sp. gr. 1.02752. 2 P.M., wind varying from S.E. to S.W.
4.	S.E.	1	bc	2	30.004	75.8	70.8	75	78.0	6	...	Cum.	
6.	S.E.	2	bcp	1	30.024	75.3	71.0	77	77.5	5	...	Cum.	
8.	S.E.	1	bc	1	30.073	79.3	72.0	66	77.0	6	...	Cum.	
10.	S.S.E.	2	bc	1	30.112	79.3	73.3	71	77.5	4	Cir.	Cum str.	
Noon.	S.S.E.	1	bc	1	30.075	79.3	72.3	67	78.0	5	Str.	Cum.	
2.	S.S.E.	1	c	1	30.021	78.3	72.8	73	78.0	10	Str.	Cum.	
4.	S.E.	3	bc	1	30.006	77.8	72.8	75	78.0	9	Str.	Cum.	
6.	S.S.E.	2	bc	1	30.021	75.8	71.8	79	78.0	5	Str.	Cum.	
8.	S.S.E.	2	bc	1	30.033	76.3	71.8	77	77.2	5	Str.	Cum.	
10.	S.S.E.	2	bc	1	30.041	76.3	72.3	79	77.2	5	Str.	Cum.	
Midt.	S.E.	3	bc	1	30.058	76.3	71.8	77	77.0	5	Str.	Cum.	
Totals.	...	22	bc	14	492	85.6	23.2	50	90.4	66	Cir str.	Cum.	
Mean.	SSE½E.	2		1	30.041	77.1	71.9	74	77.5	5			

## WEDNESDAY, 10TH.

2.	S.E.	2	bcp	1	30.024	75.8	71.8	79	77.5	4	Cir.	Cum.	At noon, lat. 9° 10' s. long. 34° 49' w. Temperature by self-registering thermo- meter, max. 80°, min. 71°.5. Current, S. 36° w. 17'.  Sp. gr. 1.02752.
4.	S.S.E.	3	bc	1	30.017	74.8	70.3	77	77.5	6	Cir.	Cum.	
6.	S.S.E.	3	bcp	1	30.051	72.8	70.3	87	76.8	8	...	Cum. & Nb.	
8.	E.S.	1	bcp	1	30.079	72.8	71.3	91	76.8	9	...	Cum. & Nb.	
10.	E.S.	2	bc	1	30.099	78.8	73.3	73	77.5	8	...	Cum.	
Noon.	E.S.E.	1	bc	1	30.088	79.0	73.3	72	77.5	6	...	Cum.	
2.	E.S.E.	1	bc	1	30.032	77.8	72.8	75	77.5	6	...	Cum.	
4.	E.S.E.	2	bc	1	29.998	77.8	73.3	77	77.5	6	...	Cum str.	
6.	E.S.E.	1	bc	1	30.009	77.5	73.3	78	77.5	5	Cir.	Cum.	
8.	E.S.E.	3	bc	1	30.051	77.5	71.8	72	77.5	4	...	Cum.	
10.	E.S.E.	4	bc	1	30.057	76.8	72.3	77	77.5	4	Cir.	Cum.	
Midt.	E.S.E.	3	bc	1	30.048	76.3	72.3	79	77.5	3	...	Cum.	
Totals.	...	26	bcp	12	553	77.7	26.1	97	88.6	69	Cir.	Cum. & Nimb.	
Mean.	SE½E.	2		1	30.046	76.5	72.2	78	77.4	6			

## THURSDAY, 11TH.

2.	E.S.E.	2	bc	1	30.017	76.3	72.3	79	77.5	4	...	Cum.	At noon, lat. 10° 11' s. long. 35° 22' w. Temperature by self-registering thermo- meter, max. 82°, min. 74°.5. Current, S. 73° w. 10'.
4.	E.S.E.	3	bc	1	30.023	75.8	71.8	79	77.2	5	...	Cum.	
6.	E.S.	2	bc	1	30.029	75.5	72.5	84	77.0	4	Cir.	Cum.	
8.	E.S.	2	bc	1	30.064	75.8	73.3	86	77.5	3	Cir.	Cum.	
10.	E.	3	bc	1	30.090	79.5	73.5	71	77.2	3	Cir.	Cum.	
Noon.	E.	2	bc	1	30.078	80.8	74.5	71	77.5	3	...	Cum.	
2.	E.	2	bc	1	30.070	78.0	72.8	74	77.8	5	Cir str.	Cum.	
4.	E.	2	bc	1	30.009	76.8	72.3	77	77.5	5	...	Cum.	
6.	E.S.	2	bc	1	30.003	77.8	72.8	75	77.5	...	...	Cum.	
8.	E.S.	2	bc	1	30.001	77.8	72.8	75	77.5	5	Cir.	Cum.	
10.	E.S.	2	bc	1	30.071	76.3	71.8	77	77.5	6	...	Cum.	
Midt.	E.S.	2	bc	1	30.063	76.3	72.0	78	77.5	3	...	Cum.	
Totals.	.	26	bc	12	509	86.7	32.4	86	52	46	Cir str.	Cum.	
Mean.	E½S.	2		1	30.042	77.2	72.7	77	77.4	4			

## FRIDAY, 12TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometre. Reduced to Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S. E.	2	bc	1	30.024	75.6	71.8	80	76.8	3	...	Cum.	At noon, lat. 10° 46' s. long. 36° 8' w. Temperature by self-registering thermo- meter, max. 79° 5, min. 74° 0. Current, s. 8'. Sp. gr. 1.02759.
4.	S. E.	1	bc	1	30.012	75.3	70.8	77	76.8	1	...	Cum.	
6.	S. E.	1	bc	1	30.039	74.8	71.8	84	77.0	1	...	Cum.	
8.	S. E.	1	bc	1	30.049	76.8	71.8	75	77.0	4	...	Cum.	
10.	SE <sup>b</sup> E.	1	bc	1	30.101	78.5	73.5	75	77.7	4	Cir.	Cum.	
Noon.	SE <sup>b</sup> S.	3	bc	1	30.051	78.3	72.5	72	77.7	4	Cir.	Cum.	
2.	SE <sup>b</sup> S.	3	bc	1	30.021	77.8	72.5	74	77.8	3	Cir.	Cum.	
4.	SE <sup>b</sup> E.	3	bc	1	30.014	76.5	71.5	75	77.8	3	Str.	Cum.	
6.	SE <sup>b</sup> E.	3	bc	1	30.038	76.8	71.8	75	...	...	...	Cum.	
8.	S. E.	3	bc	1	30.057	76.3	70.8	73	77.0	5	...	Cum.	
10.	S. E.	3	bc	1	30.051	75.8	70.8	75	77.5	4	Cir.	Cum.	
Midd.	S. E.	2	bc	1	30.001	75.8	70.8	75	77.0	4	Cir.	Cum.	
Totals.	...	24	bc	12	458	78.3	70.4	70	80.1	38			
Mean.	S. E.	2		1	30.038	76.5	71.7	76	77.3	3	Cir str.	Cum.	

## SATURDAY, 13TH.

2.	S. E.	2	bc	1	30.024	75.0	71.5	82	77.5	9	Str.	Cum.&Nb.	At noon, lat. 11° 52' s. long. 37° 16' w. Temperature by self-registering thermo- meter, max. 77°, min. 72°. Current, s. 22' w. 13'. Sp. gr. 1.02759.
4.	SE <sup>b</sup> S.	5	bc pq	2	30.031	73.3	70.0	82	77.5	9	Str.	Cm.&Nb.	
6.	SE <sup>b</sup> S.	1	bc pq	1	30.046	72.8	69.8	84	77.0	8	Cir.	Cm.&Nb.	
8.	SE <sup>b</sup> E.	2	bc	1	30.078	74.8	71.3	82	77.0	8	...	Cm.&Nb.	
10.	SE <sup>b</sup> E.	4	bc pq	1	30.094	72.8	70.5	87	77.0	9	...	Cm.&Nb.	
Noon.	E <sup>b</sup> S.	1	bc pq	1	30.060	73.8	70.3	81	76.5	9	...	Cm.&Nb.	
2.	SE <sup>b</sup> S.	3	bc	1	30.019	76.8	71.8	75	77.0	9	...	Cum.	
4.	SE <sup>b</sup> E.	2	bc	1	29.998	75.8	71.8	79	77.0	9	Cir str.	Cum.	
6.	E.S.E.	2	bc	1	30.027	75.3	71.3	77	77.0	3	...	Cum.	
8.	SE <sup>b</sup> E.	3	bc	1	30.056	75.0	71.0	79	77.0	5	...	Str. cum.	
10.	SE <sup>b</sup> E.	2	bc	1	30.080	75.3	70.8	77	76.5	2	...	Cum.	
Midd.	E.S.E.	3	bc	1	30.084	75.3	70.8	77	77.0	4	...	Cm.&Nb.	
Totals.	...	30	bc pq	13	597	56.5	10.9	2	84.0	84			
Mean.	SE <sup>b</sup> E.	2		1	30.050	74.7	70.9	80	77.0	7	Cir str.	Cum., & Nimb.	

## SUNDAY, 14TH.

2.	E.S.E.	1	bc	1	30.034	74.8	70.3	77	76.5	5	...	Cm.&Nb.	At noon, lat. 13° 6' s. long. 38° 2' w. Temperature by self-registering thermo- meter, max. 83°, min. 73°.  4.30 P.M., anchored in Bahia harbour.
4.	E <sup>b</sup> N.	2	bc	1	30.012	75.8	70.8	75	76.5	3	Cir.	Cum.	
6.	E <sup>b</sup> N.	1	bc	1	30.043	73.8	69.8	79	76.5	2	...	Cum.	
8.	E <sup>b</sup> N.	1	bc	1	30.074	76.8	71.8	75	76.5	2	...	Cum.	
10.	E <sup>b</sup> N.	1	bc	1	30.080	78.0	73.0	75	...	4	...	Cum.	
Noon.	E <sup>b</sup> N.	1	bc	1	30.070	78.3	73.8	77	...	4	...	Cum.	
2.	SSE <sup>b</sup> E.	1	bc	1	29.999	76.8	71.8	75	78.0	8	...	Cum.	
4.	SSE <sup>b</sup> E.	2	bc	1	29.983	76.8	73.3	75	78.0	8	...	Cum.	
6.	SSE <sup>b</sup> E.	1	bc	1	29.993	75.8	72.8	84	...	5	Str.	Cum.	
8.	Calim.	0	bc	1	30.021	75.3	71.8	82	...	3	...	Cum.	
10.	Calim.	0	bc	...	30.041	74.8	71.8	84	...	1	...	Cum.	
Midd.	NE <sup>b</sup> N.	1	bc	...	30.041	74.8	71.8	84	...	3	...	Cum.	
Totals.	...	11	bc	10	391	71.8	22.8	102	42	48			
Mean.	E <sup>b</sup> S.	1		1	30.033	76.0	71.9	78	77.0	4	Cir str.	Cum.	

## MONDAY, 15TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.021	74.8	71.8	81	...	4	...	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 79°, min. 73°.
4.	Calm.	0	bc	...	30.026	74.3	71.8	87	...	4	...	Cum.	
6.	Calm.	0	bc	...	30.021	73.8	71.8	89	...	4	...	Cum str.	
8.	Calm.	0	bc	...	30.057	75.8	73.8	89	...	7	...	Cum str.	
10.	Variable.	1	bc	...	30.065	78.3	74.5	80	...	6	...	Cm.&Nb.	
Noon.	S.E.	1	od	...	30.053	75.8	73.0	85	...	9	...	Nimb.	
2.	S.E.	1	bcp	...	30.065	77.8	73.8	79	...	8	Cir cum.	Nimb.	
4.	S.E.	2	bc	...	29.981	78.3	74.3	79	...	7	...	Cum str.	
6.	E.N.E.	1	bc	...	29.971	76.8	73.8	84	...	3	...	Cum.	
8.	E.N.	1	b	...	29.991	75.8	72.3	82	...	0	...	...	
10.	Calm.	0	bc	...	30.035	75.5	73.0	86	...	2	...	Cum.	
Midt.	Calm.	0	bc	...	30.043	74.8	72.4	87	...	1	...	Cum.	
Totals.	...	7	bcp	...	272	71.8	36.3	51	...	55	Cir cum.	Cum. & Nimb.	
Mean.	S.E.	1		...	30.023	76.0	73.0	84	...	5			

## TUESDAY, 16TH.

2.	E.N.	1	bc	...	30.004	74.8	72.8	89	...	2	...	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 83° 5, min. 73° 0.
4.	E.N.	1	b	...	29.993	74.8	71.8	84	...	0	...	...	
6.	Variable.	1	bc	...	30.007	74.3	72.2	89	...	4	Str.	Cum.	
8.	S.E.	1	bc	...	30.024	75.8	72.8	84	...	5	...	Cum.	
10.	S.E.	1	bc	...	30.044	76.8	73.8	84	...	5	Cir.	Cum.	
Noon.	S.E.	1	bc	...	30.009	77.8	75.8	89	...	5	Cir.	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	S.E.	2	bc	...	29.926	80.0	74.0	71	...	8	...	Cum.	
6.	S.E.	3	...	...	29.951	78.8	73.8	75	...	...	...	...	
8.	E.N.	3	...	...	29.980	78.8	73.8	75	...	4	Cir.	Cum.	
10.	E.N.	2	bc	...	...	...	...	...	...	8	...	Cum.	
Midt.	E.N.	2	bc	...	29.991	76.8	72.8	79	...	5	Cir.	Cum.	
Totals.	...	17	bc	...	9932	68.7	33.7	19	...	46	Cir str.	Cum.	
Mean.	E. N. E.	2		...	29.993	76.0	73.4	82	...	4			

## WEDNESDAY, 17TH.

2.	Calm.	0	c	...	29.989	75.8	73.8	89	...	8	...	Cm.&Nb.	At Bahia. Temperature by self-registering thermo- meter, max. 76° 5, min. 70° 5.
4.	S.E.	1	o	...	29.981	75.8	73.2	86	...	10	...	Cm.&Nb.	
6.	W.S.W.	4	oe	...	30.006	74.8	72.8	89	...	10	...	Cm.&Nb.	
8.	W.S.W.	3	oe	...	29.957	71.8	71.3	97	...	10	...	Cum.	
10.	W.S.W.	2	c	...	29.979	72.8	71.8	94	...	8	...	Cum.	
Noon.	swbs.	1	crd	...	30.021	74.3	72.8	91	...	9	...	Cum.	
2.	swbs.	2	ocr	...	30.001	74.3	72.8	91	...	10	...	Cmstr.&Nb.	
4.	swbs.	4	oe	...	29.977	75.3	73.3	89	...	10	...	Cmstr.&Nb.	
6.	swbs.	3	ocr	...	29.994	74.3	72.8	91	...	10	...	Cmstr.&Nb.	
8.	S.E.	1	ocr	...	30.021	72.3	70.8	91	...	10	...	Cum.	
10.	S.E.	1	ocr	...	30.011	71.8	71.8	100	...	10	...	Cm.&Nb.	
Midt.	S.E.	1	o-r	...	30.011	71.8	70.8	94	...	10	...	Cm.&Nb.	
Totals.	...	23	ocr	...	11948	45.1	28.0	1102	...	115	...	Cum. & Nimb.	
Mean.	Variable.	2		...	29.996	73.8	72.3	92	...	9			

## THURSDAY, 18TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw $\frac{1}{2}$ s.	1	ocr	...	30.027	70.8	69.8	94	...	10	...	Cm.&Nb.	At Bahia. Temperature by self-registering thermo- meter, max. 74° 5', min. 69° 5'.
4.	sw $\frac{1}{2}$ s.	1	ocr	...	30.003	70.8	70.8	100	...	10	...	Cm.&Nb.	
6.	Variable.	5	ocr	...	30.035	71.0	70.3	95	...	10	...	Cm.st.&Nb.	
8.	sw $\frac{1}{2}$ w.	3	ocqp	...	30.075	72.0	71.0	94	...	10	...	Str.&Nb.	
10.	sw $\frac{1}{2}$ w.	3	ocqp	...	30.081	72.0	71.0	94	...	10	...	Str.&Nb.	
Noon.	swbs.	1	ocp	...	30.079	72.0	71.0	94	...	10	...	Cm.&Nb.	
2.	swbs.	12	bc	...	30.017	73.3	71.8	91	...	10	...	Cum.	
4.	sw $\frac{1}{2}$ s.	12	bc	...	29.977	73.8	72.8	94	...	8	...	Cum.	
6.	sse $\frac{1}{2}$ e.	3	oc	...	30.007	73.8	72.3	91	...	10	...	Cum.	
8.	sw $\frac{1}{2}$ s.	3	ocqp	...	30.017	74.0	72.8	93	...	10	...	Cum.	
10.	s.	3	ocqp	...	30.024	74.0	72.8	93	...	10	...	Cum.	
Midd.	swbs.	2	ocqp	...	30.026	73.3	72.5	96	...	10	...	Cum.	
Totals.	...	29	...	...	368	30.8	18.9	49	...	118	...	Cum. & Nimb.	
Mean.	swbs.	2	...	...	30.031	72.6	71.6	94	...	10	...		

## FRIDAY, 19TH.

2.	swbs.	1	bc	...	29.979	72.8	71.8	94	...	8	...	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 76° 2', min. 71° 0'.
4.	sw $\frac{1}{2}$ s.	1	bc	...	29.958	72.8	71.8	94	...	8	...	Cum.	
6.	sw $\frac{1}{2}$ w.	1	oe	...	29.993	73.8	72.3	91	...	10	...	Cum str.	
8.	w $\frac{1}{2}$ s.	2	...	...	30.045	72.8	72.3	97	...	...	...	Cum str.	
10.	Vble.	1	ocp	...	30.062	71.8	70.8	94	...	10	...	Cm.st.&Nb.	
Noon.	sw $\frac{1}{2}$ w.	1	oe	...	30.032	72.5	71.8	96	...	10	...	Str.	
2.	sw $\frac{1}{2}$ e.	1	oe	...	29.968	75.3	74.3	94	...	8	...	Cm.&Nb.	
4.	sse $\frac{1}{2}$ e.	2	bc	...	29.960	74.8	73.3	91	...	10	...	Cum.	
6.	e $\frac{1}{2}$ s.	1	ed	...	29.959	73.8	71.8	89	...	9	...	Cm.st.&Nb.	
8.	Calm.	0	c	...	30.002	74.3	72.8	91	...	10	...	Cm.st.&Nb.	
10.	Calm.	0	c	...	30.021	74.5	73.0	91	...	10	...	Str.	
Midd.	Calm.	0	c	...	30.044	73.8	73.3	97	...	9	...	Cum str.	
Totals.	...	11	...	...	923	43.0	29.3	39	...	102	...	Cum., Cum str., & Nimb.	
Mean.	Variable.	1	bcpl	...	30.002	73.6	72.4	93	...	9	...		

## SATURDAY, 20TH.

2.	Calm.	0	bc	...	30.009	74.3	73.0	92	...	8	...	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 79°, min. 71° 2'.
4.	Calm.	0	bc	...	29.988	74.3	73.0	92	...	8	...	Cum.	
6.	NE $\frac{1}{2}$ N.	1	cpd	...	30.008	72.3	71.8	97	...	10	...	Cm.st.&st.	
8.	se $\frac{1}{2}$ e.	1	c	...	30.049	73.8	71.8	89	...	9	...	Cm.&cm.st.	
10.	wbs.	1	bc	...	30.057	74.8	72.8	89	...	7	...	Cum.	
Noon.	se $\frac{1}{2}$ e.	2	bc	...	30.051	77.8	71.8	71	...	6	...	Cir str.	
2.	se $\frac{1}{2}$ e.	2	bc	...	...	77.5	70.8	68	...	5	...	Cir cum.	
4.	se $\frac{1}{2}$ e.	2	bc	...	29.973	77.5	70.8	68	...	3	...	Cir cum.	
6.	ebs $\frac{1}{2}$ s.	1	bc	...	29.978	76.3	71.8	77	...	2	...	Sm. cum.	
8.	ebs $\frac{1}{2}$ s.	1	bc	...	30.008	74.8	71.8	84	...	0	...	Cum.	
10.	Calm.	0	bc	...	30.045	74.5	70.8	80	...	2	...	Cum str.	
Midd.	Calm.	0	bc	...	30.049	73.8	70.8	84	...	2	...	Cum str.	
Totals.	...	11	...	...	215	61.7	21.0	991	...	62	...	Cir cum.	Cum. & Cum str.
Mean.	Variable.	1	bcpl	...	30.019	75.1	71.7	83	...	5	...		

## SUNDAY, 21ST SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to sea- level and sea-level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE ½ E.	1	bc	...	30.987	73.3	70.8	87	...	12	...	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 80°, min. 72° 0.
4.	SE ½ E.	1	bc	...	30.967	72.8	69.8	84	...	1	...	Cum.	
6.	E ½ S.	1	bc	...	30.909	73.5	69.8	81	...	12	Cir.	Cum.	
8.	SE ½ W.	1	bc	...	30.917	74.3	70.8	82	...	12	...	Cum.	
10.	SE ½ E.	2	bc	...	30.921	77.8	71.8	71	...	5	Cir.	Cum.	
Noon.	SE ½ E.	3	bc	...	30.950	77.8	71.8	71	...	6	Cir str.	Cum.	
2.	SE ½ E.	3	bc	...	29.991	77.8	72.0	72	...	4	Cir.	Cum.	
4.	SE ½ E.	2	bc	...	29.970	77.8	71.8	71	...	4	Cir.	Cum.	
6.	SE ½ E.	1	bc	...	29.975	74.8	72.3	87	...	4	Cir.	Cum.	
8.	Calm.	0	bc	...	30.911	75.5	71.5	79	...	12	...	Cum.	
10.	Calm.	0	bc	...	30.920	75.3	71.3	79	...	12	...	Cum.	
Midt.	Calm.	0	bc	...	30.919	74.8	70.8	79	...	5	Cir.	Cum.	
Totals.	...	15	bc	...	980	65.5	14.5	103	...	39	Cir.	Cum.	
Mean.	SE ½ E.	1		...	30.907	75.5	71.2	79	...	3			

## MONDAY, 22d.

2.	Calm.	0	bc	...	30.901	74.0	70.8	83	...	5	Cir.	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 79° 5, min. 72° 7.
4.	SE ½ E.	1	bc	...	29.973	73.8	70.8	84	...	4	Cir.	Cum.	
6.	SE ½ E.	1	bc	...	29.995	73.8	70.8	84	...	3	...	Cum.	
8.	SE ½ E.	1	bc	...	30.911	76.3	70.8	73	...	5	Cir.	Cum.	
10.	SE ½ E.	2	bc	...	30.921	78.8	72.8	71	...	6	Cir.	Cum str.	
Noon.	SE ½ W.	2	bc	...	30.921	78.8	70.8	63	...	7	Cir.	Cum str.	
2.	SE ½ E.	2	bc	...	29.989	78.8	71.5	66	...	6	Cir.	Cum.	
4.	SE ½ E.	2	bc	...	29.969	77.8	71.8	71	...	6	Cir.	Cum.	
6.	E ½ N.	1	bc	...	29.960	76.3	71.8	77	...	...	...	...	
8.	E ½ N.	1	...	...	29.971	74.8	71.8	84	...	...	...	Cum.	
10.	E ½ N.	1	bc	...	29.991	74.8	72.3	86	...	...	...	Cum.	
Midt.	SE ½ E.	1	bc	...	29.982	74.8	70.8	79	...	...	...	Cum.	
Totals.	...	15	bc	...	11884	72.8	16.8	921	...	42	Cir.	Cum.	
Mean.	S. E.	1		...	29.990	76.1	71.4	77	...	5			

## TUESDAY, 23d.

2.	SE ½ W.	...	...	...	29.961	73.8	71.3	86	...	8	Str.	Cum.	At Bahia. Temperature by self-registering thermo- meter, max. 81° 5, min. 71° 5.
4.	SE ½ W.	...	...	...	29.950	73.8	70.8	84	...	...	...	...	
6.	Calm.	0	bc	...	29.979	73.8	70.8	84	...	7	...	Cum str.	
8.	E ½ N.	1	bc	...	30.932	78.8	72.8	71	...	8	...	Cum str.	
10.	Calm.	0	bc	...	30.936	78.0	73.0	75	...	8	...	Cum str.	
Noon.	E ½ N.	2	bc	...	30.914	76.8	72.3	77	...	8	...	Cum.	
2.	E ½ N.	2	bc	...	29.953	76.8	72.8	79	...	8	...	Cum.	
4.	SE ½ E.	2	bc	...	29.941	76.8	72.3	77	...	5	Str.	Cum.	
6.	SE ½ E.	1	bc	...	29.954	76.3	72.3	79	...	4	Str.	Cum.	
8.	SE ½ E.	1	bc	...	29.977	75.3	71.8	82	...	2	...	Cum.	
10.	SE ½ E.	1	bc	...	29.997	74.8	70.8	79	...	2	...	Cum.	
Midt.	SE ½ E.	1	bc	...	29.993	74.8	70.8	79	...	6	...	Cum.	
Totals.	...	11	bc	...	11777	69.8	21.8	112	...	66	Str.	Cum.	
Mean.	SE ½ E.	1		...	29.981	75.8	71.8	79	...	6			

## WEDNESDAY, 24TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E.	1	bc	...	30.009	73.8	70.3	81	...	2	...	Cum.	At Bahia. Temperature by self-registering thermometer, max. 81° 2, min. 72° 8.
4.	S.E.	1	bc	...	29.964	73.8	69.8	79	...	12	...	Cum.	
6.	S.E.	1	bc	...	29.877	73.8	70.8	84	...	5	...	Cum.	
8.	N.E.	1	bc	...	30.011	77.3	72.8	77	...	5	...	Cum.	
10.	N.W.	1	bc	...	30.024	76.3	72.8	82	...	6	Str.	Cum. str.	
Noon.	S.E.	1	bc	...	30.020	78.3	72.3	71	...	6	...	Cum. & cum. str.	
2.	S.E.	1	bc	...	30.020	77.8	71.0	68	...	6	...	Cum. & cum. str.	
4.	S.E.	1	bc	...	30.020	77.8	72.3	73	...	6	...	Cum. str.	
6.	S.E.	1	bc	...	29.990	77.8	71.8	71	...	1	...	Cum. str.	
8.	Cal.	0	bc	...	30.008	75.5	70.8	76	...	3	...	Cum.	
10.	S.E.	1	bc	...	30.024	74.8	70.8	79	...	12	...	Cum.	
Midt.	S.E.	1	bc	...	30.034	74.3	70.8	82	...	12	...	Cum.	
Totals.	...	13	bc	...	.001	71.3	16.3	923	...	46	Str.	Cum. & Cum. str.	
Mean.	S.E.	1	bc	...	30.000	75.9	71.4	77	...	4	Str.	Cum. & Cum. str.	

## THURSDAY, 25TH.

2.	S.E.	1	bc	...	30.046	74.0	70.8	83	...	3	...	Cum.	At Bahia. Temperature by self-registering thermometer, max. 80° 5, min. 73° 2.
4.	S.E.	1	bc	...	30.024	74.3	71.3	84	...	3	...	Cum.	
6.	S.E.	1	bc	...	30.038	74.8	71.8	84	...	5	...	Cum.	
8.	...	...	bc	...	30.043	77.8	72.8	75	...	4	...	Cum.	
10.	S.E.	1	bc	...	30.056	78.3	73.3	75	...	4	...	Cum.	
Noon.	S.E.	12	bc	...	30.068	79.3	74.3	75	...	5	...	Cum.	
2.	S.E.	12	bc	...	30.030	76.8	72.8	79	...	6	...	Cum. str.	
4.	S.E.	12	bcp	...	30.021	77.3	73.3	79	...	6	...	Cum.	
6.	S.E.	3	bc	...	30.040	76.8	71.8	75	77.3	4	...	Cum.	
8.	S.E.	2	...	...	30.061	76.8	71.8	75	77.5	...	...	...	
10.	S.E.	2	bc	...	30.077	76.5	71.3	74	77.5	2	...	Str.	
Midt.	S.E.	2	bc	...	30.087	76.5	71.3	74	77.5	3	...	Cum.	
Totals.	...	19	bcp	...	.591	76.2	26.6	92	20.7	45	...	Cum.	
Mean.	S.E.	2	bcp	...	30.049	76.6	72.2	78	77.4	4	...	Cum.	

## FRIDAY, 26TH.

2.	S.E.	1	bc	...	30.051	75.8	70.8	75	76.7	2	Cir. cum.	...	At noon, lat. 13° 45' s. long. 37° 59' w. Temperature by self-registering thermometer, max. 82°, min. 74° 5.
4.	S.E.	2	bc	...	30.005	75.8	70.8	75	76.7	2	...	Cum.	
6.	S.E.	1	bc	...	30.058	74.8	70.5	78	77.0	3	...	Cum.	
8.	S.E.	3	bc	2	30.093	76.3	71.3	75	77.2	2	...	Cum.	
10.	S.E.	2	bc	2	30.104	75.8	70.3	73	77.2	2	...	Cum.	
Noon.	S.E.	2	bc	2	30.093	76.8	70.8	71	77.5	2	...	Cum.	
2.	S.E.	1	bc	1	30.059	77.8	71.5	70	78.0	3	...	Cum.	
4.	S.E.	1	bc	1	30.023	77.3	71.8	73	78.0	5	...	Cum.	
6.	S.E.	1	bc	...	30.041	78.8	72.8	71	77.5	5	...	Cum.	
8.	S.E.	1	bc	1	30.066	76.8	71.8	75	77.5	5	...	Cum.	
10.	S.E.	2	bc	1	30.069	76.0	71.8	78	77.2	4	Str.	Cum. & Nimb.	
Midt.	S.E.	3	bc	2	30.070	76.3	72.3	79	77.0	4	...	Cum. & Nimb.	
Totals.	...	20	bc	12	.732	78.3	16.5	53	35	39	Cir. cum.	Cum. & Nimb.	
Mean.	S.E.	2	bc	1	30.061	76.5	71.4	74	77.3	3	Cir. cum.	Cum. & Nimb.	

SATURDAY, 27<sup>TH</sup> SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E. by E.	4	bc	2	30.039	75.8	70.8	75	77.0	4	...	Cum.	At noon, lat. 14° 51' s. long. 37° 1' w. Temperature by self-registering thermometer, max. 80° 5. min. 74° 3. Current, s. 27° w. 2.
4.	S.E. by E.	3	bc	2	30.019	76.8	70.8	71	77.0	4	...	Cum.	
6.	S.E. by E.	3	bc	1	30.045	74.8	69.8	74	77.0	4	...	Str. cum.	
8.	S.E. by E.	3	bc	1	30.081	75.8	70.8	75	77.0	3	Cir.	Cum.	Sp. gr. 1.02780.
10.	E. by S.	3	bc	1	30.091	78.8	72.8	71	77.5	4	...	Cum.	
Noon.	E. by S.	3	bc	1	30.071	79.5	73.5	71	77.5	4	...	Cum.	
2.	E. by S.	3	bc	1	30.045	77.8	73.8	79	77.0	4	...	Cum.	
4.	E. by S.	3	bc	1	30.046	76.5	72.3	78	77.0	4	...	Cum.	
6.	E. by S.	3	bc	1	30.054	76.0	71.3	76	77.0	5	...	Cum.	
8.	E. by S.	3	bc	1	30.054	75.8	71.8	79	77.0	...	...	Cum.	
10.	E. by S.	3	bc	1	30.094	75.5	71.8	80	76.8	2	...	Cum.	
Midt.	E. by S.	3	bc	2	30.107	75.3	71.3	79	76.0	3	...	Cum.	
Totals.	...	31	bc	17	746	78.4	20.8	68	83.8	37	Cir.	Cum.	
Mean.	E. S. E.	3		2	30.062	76.5	71.7	76	77.0	3			

SUNDAY, 28<sup>TH</sup>.

2.	E. by S.	3	bcp	2	30.063	74.3	71.0	83	76.0	4	...	Cum. & Nb.	At noon, lat. 17° 7' s. long. 36° 50' w. Temperature by self-registering thermometer, max. 82° min. 73° 5. Current, s. 51° w. 21.
4.	E. by S.	4	bc	2	30.047	74.3	70.0	78	76.0	2	...	Cum.	
6.	E. by S.	3	bc	3	30.093	74.0	69.8	78	76.0	2	...	Cum.	
8.	E. by S.	2	bc	2	30.100	76.8	71.0	72	76.5	2	...	Cum.	Sp. gr. 1.02785.
10.	E. by S.	4	bc	2	30.126	76.8	72.8	79	76.5	6	Str.	Cum.	
Noon.	E. S. E.	4	bc	1	30.114	77.8	72.0	72	76.5	6	Str.	Cum.	
2.	N.E. by E.	4	bc	2	30.096	78.3	71.8	69	76.7	5	Cir str.	...	
4.	N.E. by E.	3	bc	2	30.094	78.0	73.3	76	76.7	4	Str.	Cum.	
6.	N.E. by E.	3	bc	2	30.066	77.3	71.8	73	77.2	3	Str.	Cum.	
8.	N.E. by E.	2	bc	2	30.111	75.8	70.8	75	75.5	3	...	Cum.	
10.	N.E. by E.	3	bc	2	30.094	75.3	70.8	77	75.5	2	...	Cum.	
Midt.	N.E. by E.	3	bc	2	30.088	75.3	70.8	77	75.5	2	...	Cum.	
Totals.	...	38	bcp	24	1092	71.0	15.9	69	74.6	40	Str.	Cum.	
Mean.	E. N. E.	3		2	30.091	76.2	71.3	76	76.2	3			

MONDAY, 29<sup>TH</sup>.

2.	N.E. by E.	4	bep	2	30.088	75.3	70.8	77	75.5	5	Cir.	Cum.	At noon, lat. 19° 6' s. long. 35° 46' w. Temperature by self-registering thermometer, max. 79° 2. min. 72° 5. Current, s. 17° w. 21.
4.	N.E. by E.	3	bep	3	30.079	74.0	70.3	80	75.0	7	...	Cum.	
6.	N.E. by E.	4	bc	2	30.086	73.5	69.8	80	74.0	3	...	Cum str.	
8.	N.E. by E.	3	bc	2	30.102	73.8	70.5	83	74.0	5	Str.	Cum.	Sp. gr. 1.02771.
10.	N.E. by E.	3	bc	2	30.160	77.3	72.3	75	74.5	6	Cir str.	Cum.	
Noon.	N.E. by E.	2	bc	2	30.119	78.5	73.0	73	74.5	4	Cir str.	Cum.	
2.	E. by N.	2	bc	2	30.113	76.3	71.8	77	74.7	3	Cir.	Cum.	
4.	E. by N.	2	bc	1	30.111	76.0	70.8	74	74.7	2	Cir.	Cum.	
6.	N.E. by E.	1	...	1	30.129	76.0	71.8	78	74.0	...	...	Cum.	
8.	N.E. by E.	1	bc	1	30.147	74.8	70.8	79	74.8	3	Cir.	Cum.	
10.	E. by N.	1	bc	1	30.173	73.8	70.5	83	75.0	2	...	Cum.	
Midt.	E. by N.	1	bc	1	30.183	73.8	70.3	81	74.7	4	...	Cum.	
Totals.	...	27	bep	29	1490	63.1	12.7	100	55.4	44	Cir str.	Cum.	
Mean.	E. S. E.	2		2	30.124	75.3	71.1	78	74.6	4			

## TUESDAY, 30TH SEPTEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.	1	bc	1	30.147	72.8	69.3	81	74.0	3	...	Cum.	At noon, lat. 20° 13' s. long. 35° 19' w. Temperature by self-registering thermo- meter, max. 79°, min. 71°. Current, s. 5° w. 22'.
4.	E.S.	1	bc	1	30.119	72.8	69.3	81	74.0	4	...	Cum.	
6.	E.S.	2	bc	1	30.185	71.8	68.0	79	74.0	3	...	Cum.	
8.	E.S.	1	bc	1	30.198	74.3	69.8	77	73.8	1	...	Cum.	
10.	E.S.	1	b	1	30.179	75.0	70.0	74	74.0	0	...	...	
Noon.	E.S.	1	bc	1	30.179	75.5	70.0	72	74.2	1	Str.	Cum.	
2.	S.E.	3	bc	1	30.133	76.3	69.8	69	74.0	3	Str.	Cum.	
4.	S.E.	2	bc	1	30.146	75.3	69.0	69	74.0	4	Cir.	Cum.	
6.	E.S.E.	2	bc	...	29.162	75.8	68.8	67	73.5	3	Cir.	Cum.	
8.	E.S.E.	4	bc	2	30.184	72.8	67.8	74	73.5	2	...	Cum.	
10.	E.S.E.	3	bc	2	30.171	72.8	68.8	79	73.5	1	...	Cm.&Str.	Sp. gr. 1.02767.
Midt.	E.S.E.	3	bc	2	30.171	72.3	67.8	77	73.5	1	Cir.	Cm.&Str.	
Totals.	...	24	bc	14	1974	47.5	108.4	59	46.0	26	Cir str.	Cum. & Cnm str.	
Mean.	E.S.	2		1	30.164	73.9	69.0	75	73.8	2			

## WEDNESDAY, 1ST OCTOBER.

2.	E.S.E.	4	bc	1	30.185	71.8	67.8	79	73.0	6	...	Cum.	At noon, lat. 22° 15' s. long. 35° 37' w. Temperature by self-registering thermo- meter, max. 76°, min. 70°. Current, s. 83° w. 16'.
4.	E.S.	3	bc	1	30.168	71.8	67.8	79	73.0	5	...	Cum.	
6.	E.S.	3	bc	1	30.183	70.8	67.3	81	73.0	4	Cir.	Cum str.	
8.	E.S.	3	bc	1	30.204	73.8	66.8	66	72.7	3	Cir.	Cum str.	
10.	E.S.	3	bc	1	30.212	75.8	68.0	64	73.0	4	Cir.	Cum str.	
Noon.	E.S.	4	bc	1	30.204	75.0	68.8	69	73.0	3	Cir.	Cum str.	
2.	E.S.	3	bc	1	30.175	75.0	68.5	68	73.0	3	Cir.	Cum str.	
4.	E.S.	4	bc	1	30.162	73.0	68.0	74	73.0	4	Cir.	Cum str.	
6.	E.S.	3	bc	1	30.187	71.8	67.8	79	73.0	5	Cir.	Cum.	
8.	E.S.	4	bc	1	30.207	71.3	67.3	78	73.0	4	Cir.	Cum str.	Upper send from sw'w.
10.	E.N.E.	4	bc	1	30.270	71.3	67.8	81	72.0	6	Cir.	Str.	
Midt.	E.N.E.	5	bc	2	30.217	71.0	67.8	82	71.5	5	Cir str.	Cum.	
Totals.	...	43	bc	13	2374	32.4	93.7	900	33.2	52	Cir.	Cum. & Cum str.	
Mean.	E.	4		1	30.198	72.7	67.8	75	72.8	4			

## THURSDAY, 2D.

2.	E.N.E.	4	bc	2	30.167	70.8	67.3	81	70	6	Cir str.	Cum.	At noon, lat. 24° 43' s. long. 34° 17' w. Temperature by self-registering thermo- meter, max. 75°, min. 68° 2. Current, s. 42° w. 18'. An albatross seen in the afternoon. Sp. gr. 1.02727.
4.	N.E.	4	bc	2	30.160	69.8	66.8	83	70	5	Cir str.	Cum.	
6.	E.S.	5	bc	2	30.207	69.8	66.8	83	70	6	Cir str.	Cum.	
8.	N.E.	4	bc	2	30.259	71.3	67.8	81	70	4	...	Cum str.	
10.	N.E.	3	bc	2	30.237	72.5	68.8	80	70	2	Cir.	Cum.	
Noon.	N.E.	2	bc	1	30.237	74.0	70.0	79	69.8	1	...	Cm.&Str.	
2.	N.E.	3	bc	1	30.190	74.0	70.0	80	69.7	5	Cir str.	Cum str.	
4.	N.E.	4	bc	1	30.200	74.8	70.3	77	69.7	3	Cir str.	Str.	
6.	E.N.E.	3	bc	1	30.225	71.8	68.8	84	69.2	2	Str.	Cum.	
8.	E.N.E.	4	lw	1	30.243	69.8	67.8	88	68.7	0	...	...	Atmosphere damp
10.	N.E.	4	lw	1	30.256	69.3	67.8	91	68.5	0	...	...	
Midt.	E.N.E.	2	bcw	1	30.256	69.0	67.3	90	68.2	1	Cir.	Cum.	
Totals.	...	42	bc	17	2637	16.9	99.5	997	113.8	35	Cir str.	Cum. & Str.	
Mean.	N.E.	3		1	30.219	71.4	68.3	83	69.5	3			

## FRIDAY, 3D OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	4	bc	1	30.247	68.8	66.8	88	68.2	12	Cir str.	...	At noon, lat. 26° 15' s. long. 32° 56' w. Temperature by self-registering thermometer, max. 75°, min. 67°. Current, s. 27° w. 14'.  Sp. gr. 1.02713.
4.	N.E.	5	bc	1	30.213	68.3	66.0	87	68.0	4	Cir str.	...	
6.	N.E.	4	bc	1	30.247	68.3	66.3	88	68.5	12	Cir.	Sm. cum.	
8.	N.E. <sup>b</sup> N.	3	bc	1	30.261	69.8	66.8	83	69.0	12	Cir.	Cum.	
10.	N.E. <sup>b</sup> N.	4	bc	12	30.301	72.3	67.8	77	69.5	1	...	Cum.	
Noon.	N.E.	4	bc	12	30.277	73.5	68.8	76	69.5	1	...	Cum.	
2.	N.E.	4	bc	12	30.227	71.0	69.5	77	69.8	12	Cir.	Cum.	
4.	N.E.	4	bc	12	30.232	72.8	68.8	79	69.8	3	Cir.	Cum.	
6.	N.E.	4	bc	12	30.255	71.8	67.8	79	69.5	4	Cir.	Cum.	
8.	N.E. <sup>b</sup> N.	5	bc	12	30.253	71.8	66.8	74	69.0	3	Cir.	Cum.	
10.	N.E. <sup>b</sup> N.	5	bc	12	30.293	69.5	67.3	87	69.0	12	...	Cum.	
Midt.	N.E. <sup>b</sup> N.	4	bc	12	30.293	68.8	66.5	87	69.0	5	...	Cum.	
Totals.	...	50	bc	20	3102	9.7	89.2	22	108.8	31	Cir str.	Cum.	
Mean.	N.E.	4		2	30.258	70.8	67.4	82	69.1	3			

## SATURDAY, 4TH.

2.	N.E. <sup>b</sup> N.	3	bc	12	30.247	67.8	65.8	88	68.8	4	...	Cum.	At noon, lat. 27° 43' s. long. 31° 3' w. Temperature by self-registering thermometer, max. 74°, min. 66°. Current, s. 18° w. 13'.  Sp. gr. 1.02712.
4.	N.E. <sup>b</sup> N.	4	bc	12	30.229	67.5	65.3	87	68.5	4	...	Cum.	
6.	N.E.	4	bc	12	30.274	66.8	64.8	88	68.2	4	...	Str. & sm. cum.	
8.	N.E. <sup>b</sup> N.	4	bc	12	30.320	68.8	66.8	88	67.0	6	Cir cum.	Vol. cum.	
10.	N.E.	5	bc	12	30.310	69.8	65.3	75	67.0	4	Cir.	Cum.	
Noon.	N.E. <sup>b</sup> N.	6	bc	12	30.315	70.3	64.8	71	67.0	2	Str.	Cum.	
2.	N.E. <sup>b</sup> N.	5	bc	12	30.296	71.8	65.5	68	68.0	1	Cir cum.	...	
4.	N.E. <sup>b</sup> N.	3	b	12	30.294	72.8	66.3	68	68.0	0	...	...	
6.	N.E. <sup>b</sup> N.	2	b	1	30.278	69.8	64.8	73	67.2	0	...	...	
8.	N.E. <sup>b</sup> N.	3	b	1	30.296	68.3	64.8	81	66.7	0	...	...	
10.	N.E. <sup>b</sup> N.	2	b	1	30.316	67.8	64.5	82	66.5	0	...	...	
Midt.	N.E. <sup>b</sup> N.	2	b	1	30.318	66.8	64.3	86	65.0	0	...	...	
Totals.	...	43	bc	20	3493	108.3	63.0	955	87.9	25	Cir str. & Cir cum.	Cum.	
Mean.	N.E. <sup>b</sup> N.	4		2	30.291	69.0	65.2	79	67.3	2			

## SUNDAY, 5TH.

2.	N.E. <sup>b</sup> N.	2	b	1	30.301	66.3	64.8	91	64.0	0	...	...	At noon, lat. 29° 1' s. long. 28° 59' w. Temperature by self-registering thermometer, max. 75°, min. 64°. Current, s. 68° e. 8'.  Sp. gr. 1.02709.
4.	N.E. <sup>b</sup> N.	2	b	1	30.293	65.3	63.8	91	64.0	0	...	...	
6.	N.	2	bc	1	30.310	64.8	63.3	91	65.0	1	...	Str.	
8.	N.	1	bc	1	30.334	66.5	64.3	87	65.0	1	...	Str.	
10.	N.	1	bc	1	30.342	66.0	65.3	95	66.0	3	Cir.	Cum.	
Noon.	N.	2	b	1	30.313	69.5	65.0	76	66.0	0	...	...	
2.	N.W.	1	b	1	30.293	70.8	65.0	70	66.0	0	...	...	
4.	N.W.	1	b	1	30.267	72.3	66.0	68	66.0	0	...	...	
6.	N.W. <sup>b</sup> N.	1	bc	1	30.282	68.8	64.8	78	65.5	5	Cir str.	...	
8.	N.W. <sup>b</sup> N.	1	bc	1	30.304	66.8	63.3	81	65.2	5	...	Str.	
10.	N.W. <sup>b</sup> N.	1	b	1	30.317	65.8	62.8	83	65.2	0	...	...	
Midt.	N.W. <sup>b</sup> N.	1	b	1	30.306	65.8	62.8	83	65.2	0	...	...	
Totals.	...	16	bc	12	3662	88.7	51.2	994	63.1	15	Cir str.	Str.	
Mean.	N.W.	1		1	30.305	67.4	64.3	83	65.3	1			

## MONDAY, 6TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NW by W.	1	b	1	30-255	64.8	61.8	83	65.0	0	...	...	At noon, lat. 29° 35' s. long. 28° 9' w. Temperature by self-registering thermo- meter, max. 72° 5, min. 64° 0. Current, s. 50° w. 4'.
4.	W. S. W.	12	b	1	30-235	64.8	62.8	88	65.0	0	...	...	
6.	NW by W.	12	bc	1	30-248	64.5	62.8	90	64.7	1	...	Str.	
8.	NW by W.	3	bc	1	30-263	65.5	63.8	90	64.7	7	Cir str.	Cir cum.	
10.	NW by W.	3	bc	1	30-282	68.5	65.8	84	64.5	5	Cir cum.	Cum str.	Sp. gr. 1.02675. At 8.30 p.m. the wind shifted suddenly. first to s. w. and then to s. e.
Noon.	NW by W.	3	bc	1	30-264	70.3	66.8	81	64.8	5	Cir cum.	Str.	
2.	NW by W.	3	bc	1	30-220	69.3	65.8	81	65.0	8	Cir.	Str.	
4.	W. S. W.	12	bc	1	30-227	69.8	66.8	83	65.0	8	Cir.	Str.	
6.	W. S. W.	3	bc	1	30-234	66.8	64.8	88	64.5	6	Cir.	Cum.	Midt.
8.	W. S. W.	12	e	1	30-246	65.8	64.0	95	64.0	10	...	Cum.	
10.	S. E.	5	ocyp	1	30-233	63.3	62.3	94	64.5	5	...	Cum.	
Midt.	S. E.	6	ocym	2	30-233	62.8	61.8	94	64.5	8	...	Cum.	
Totals.	...	35	bc	13	29940	76.2	49.3	1051	56.2	63	Cir. & Cir cum.	Cum. & Str.	
Mean.	w.	3		1	30-245	66.3	64.1	88	64.7	5			

## TUESDAY, 7TH.

2.	S. E. by E.	6	oc	2	30-227	62.3	61.3	94	64.7	10	...	Nimb.	At noon, lat. 29° 11' s. long. 26° 25' w. Temperature by self-registering thermo- meter, max. 65° 5, min. 60° 7. Current, s. 17° w. 3'. Two Cape pigeons seen. Sp. gr. 1.02664.
4.	S. E.	7	oc	2	30-261	61.8	61.3	91	64.7	10	...	Cum. str.	
6.	S. E.	6	ocp	2	30-233	62.3	60.8	91	64.0	10	...	Cum str.	
8.	S. E.	5	ocyp	12	30-302	61.8	60.8	94	64.0	10	...	Cum str.	
10.	S. E. by E.	5	bcq	12	30-310	64.0	62.3	89	65.0	8	...	Cum.	Swell from the southward.
Noon.	S. E. by E.	5	cpq	12	30-320	63.8	60.8	82	64.8	9	...	St. & Cum.	
2.	S. E. by E.	4	bc	12	30-309	63.8	59.8	77	64.0	7	Cir cum.	Str.	
4.	S. E. by E.	4	oc	12	30-294	63.5	58.5	72	64.0	10	...	Cum.	
6.	S. E. by E.	4	oc	12	30-315	61.8	57.8	77	63.7	10	...	Cum.	Midt.
8.	S. E. by E.	4	oc	12	30-366	60.8	56.8	77	63.5	10	...	Cum.	
10.	S. E. by E.	5	bc	3	30-411	60.5	55.8	72	63.5	8	Cir.	Cum str.	
Midt.	S. E. by E.	4	bc	3	30-411	60.3	55.8	73	63.0	8	...	Cum str.	
Totals.	...	59	ocpq & bc	26	36699	26.7	111.8	989	48.9	110	Cir. & Cir cum.	Nimb., Cum., & Cum str.	
Mean.	S. E.	5		2	30-308	62.2	59.3	82	64.1	9			

## WEDNESDAY, 8TH.

2.	S. E. by E.	5	oc	3	30-357	59.3	54.8	74	62.8	9	...	Cum.	At noon, lat. 31° 22' s. long. 26° 54' w. Temperature by self-registering thermo- meter, max. 62° 5, min. 57° 0.
4.	S. E. by E.	4	oc	3	30-353	59.3	55.8	80	62.0	9	...	Cum.	
6.	S. E. by E.	5	oc	3	30-342	58.3	55.8	84	61.8	10	...	Str. & Nib.	
8.	E.	5	oc	3	30-340	58.8	55.8	82	61.5	10	...	Cum str.	
10.	E.	5	oc	2	30-370	59.8	56.0	77	62.0	10	...	Cum.	Sp. gr. 1.02648.
Noon.	E. by N.	5	oc	2	30-333	61.3	56.8	75	62.0	9	...	Cum.	
2.	E. by N.	4	c	3	30-317	60.5	56.3	75	61.0	10	...	Cum str.	
4.	E. by N.	6	c	3	30-295	60.0	56.0	76	61.0	10	...	Cum str.	
6.	E. by N.	5	cp	3	30-294	59.8	56.5	80	61.0	10	...	Cum str.	Midt.
8.	E. by N.	5	cr	3	30-326	57.8	56.3	90	61.0	10	...	Nimb.	
10.	E. by N.	5	ocqr	3	30-289	56.8	55.8	93	60.0	10	...	Cum. & Nib.	
Midt.	E. N. E.	5	ocqr	3	30-234	55.8	55.8	100	60.0	10	...	Cum. & Nib.	
Totals.	E.	59	ocqr	34	38560	167.5	71.7	986	16.1	117		Cum., Nimb., & Cum str.	
Mean.	E.	5		3	30-321	59.0	56.0	82	61.3	10			

## THURSDAY, 9th OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometre, reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. Jan.	Temperature of Sea surface.	Clouds, 6 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N.E.	7	ocqr	4	30.185	55.8	55.8	100	60.0	10	Nimb.		At noon, lat. 33° 57' S. long. 24° 35' W. Temperature by self-registering thermometer, max. 60° 5, min. 51. Current, S. 27° W. 20'. Sp. gr. 1.02658.
4.	E.N.E.	6	ocqr	4	30.145	55.8	55.8	100	60.0	10	Nimb.		
6.	E.N.E.	7	ocqr	4	30.121	56.3	55.8	97	59.0	10	Nimb.		
8.	E.N.E.	6	ocqr	4	30.091	55.5	55.3	98	59.0	10	Nimb.		
10.	E.N.E.	8	ocqr	4	30.083	55.8	55.5	99	58.7	10	Nimb.		
Noon.	E.N.E.	9	ocqr	4	30.020	55.8	54.8	93	58.7	10	Nimb.		
2.	E.N.E.	7	ocqr	4	29.978	55.3	54.8	97	57.0	10	Nimb.		
4.	E.N.E.	9	ocqr	4	29.875	55.8	54.8	93	57.2	10	...	Cm.&Nb	
6.	N.E.	8	ocqr	5	29.828	55.3	54.8	97	57.0	10	...	Nimb.	
8.	N.E.	9	ocqr	5	29.808	56.3	55.8	97	58.0	10	...	Nimb.	
10.	N.E.	6	or	4	29.754	57.3	56.8	97	57.5	10	...	Nimb.	
Midt.	S.	3	or	4	29.715	58.0	57.8	99	57.0	10	...	Nimb.	
Totals.	...	85	ocqr	50	11603	73.0	67.8	87	99.1	129	...	Nimb.	
Mean.	N.E.	7		4	29.967	56.1	55.6	97	58.3	10			

## FRIDAY, 10th.

2.	N.W.	1	edr	4	29.646	57.8	57.8	100	57.0	10	Nimb.		At noon, lat. 35° 25' S. long. 23° 40' W. Temperature by self-registering thermometer, max. 61°, min. 54° 5. Current, S. 27° W. 21'. Sp. gr. 1.02619.
4.	S.	4	edr	4	29.595	57.5	57.3	98	56.5	10	Nimb.		
6.	N.W.	3	bc	3	29.576	57.8	57.8	100	56.5	8	Cir str.	Cum.	
8.	N.W.W.	1	bcm	2	29.588	58.3	58.0	99	57.0	8	Cir.	Cm.&Nb	
10.	N.W.W.	1	bcm	2	29.565	58.8	58.8	94	57.5	9	...	Cm.&Nb	
Noon.	N.W.W.	1	ef	2	29.562	59.8	59.0	95	57.5	10	...	Cum.	
2.	W.S.	2	bc	2	29.529	58.8	57.8	94	57.0	8	...	Cum.	
4.	N.W.S.	3	f	2	29.564	56.8	56.3	97	57.0	10	...	Str.	
6.	N.W.S.	5	bcd	3	29.595	55.5	54.5	93	55.0	10	...	Str. cum.	
8.	S.S.W.	6	ocqld	3	29.623	54.8	53.8	93	55.0	10	...	Str. cum.	
10.	N.W.	5	ocqd	3	29.643	54.3	53.3	93	56.0	9	...	Nb.&Cm.	
Midt.	N.W.	6	ocqd	3	29.651	53.8	52.8	93	56.0	9	...	Nb.&Cm.	
Totals.	...	65	ocqld	33	7137	85.0	77.2	69	78.0	111	Cir str.	Nimb. & Cum.	
Mean.	W.	3		3	29.595	57.1	56.4	96	56.5	9			

## SATURDAY, 11th.

2.	S.W.W.	4	cd	3	29.693	53.8	52.8	93	56.7	9	Cir str.	Cm.&Cm.s	At noon, lat. 35° 41' S. long. 20° 55' W. Temperature by self-registering thermometer, max. 60°, min. 52° 5. Current, S. 64° E. 16'. 2 A.M., a double ring round the moon. Sp. gr. 1.02627. 10.30 P.M., wind shifted suddenly from S. to W.S.W., the sky clearing. 11 P.M., sheet lightning to S.E. and
4.	N.W.W.	3	bc	3	29.708	53.8	52.5	92	56.7	8	Cir str.	Cum.	
6.	S.W.W.	4	bcp	3	29.740	54.3	52.3	86	56.5	8	Cir.	Cum str.	
8.	S.W.W.	2	ocp	3	29.754	54.3	53.3	93	56.5	9	Cir.	Cum.	
10.	W.S.W.	1	bcp	3	29.778	56.8	54.8	87	57.0	8	Cir str.	Cm.&Nb	
Noon.	W.S.	2	bc	2	29.769	56.8	54.5	86	58.2	6	Cir.	Cum.	
2.	N.W.S.	2	bc	2	29.752	57.3	54.5	83	58.5	9	...	Cm.&Nb	
4.	N.W.W.	2	ocp	2	29.739	57.3	54.8	84	58.5	10	...	Cm.&Nb	
6.	N.W.S.	1	bcp	2	29.761	57.3	54.8	84	58.2	4	Str.	Cm.&Nb	
8.	W.S.	3	bcp	2	29.766	57.3	54.8	84	56.5	6	Str.	Cm.&Nb	
10.	N.W.	5	bcp	2	29.716	57.0	55.8	92	56.0	8	...	Cm.&Nb	
Midt.	W.S.	4	bcl	2	29.696	55.8	53.5	85	55.5	5	...	Cm.&Nb	
Totals.	...	33	bcp	29	8752	71.8	48.4	1049	84.8	90	Cir str.	Cum. & Nimb.	
Mean.	W.S.	3		2	29.729	56.0	54.0	87	57.1	7			

## SUNDAY, 12TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.			Upper.	Lower.	
2.	whs. N.	5	bc	2	29.681	55.3	53.8	90	55.5	2	...	At noon, lat. 36° 10' S. long. 17° 52' W. Temperature by self-registering thermo- meter, max. 58°, min. 48°. Current, N. 59° E. 17.
4.	NW $\frac{1}{2}$ W.	4	bc	2	29.681	54.8	52.8	87	55.2	4	...	
6.	SW $\frac{1}{2}$ S.	5	bc	2	29.678	52.8	51.6	87	55.2	5	...	
8.	SSW $\frac{1}{2}$ W.	6	bc	2	29.752	53.8	50.8	80	...	6	...	
10.	SSW $\frac{1}{2}$ W.	5	bc	3	29.782	51.8	50.3	90	55.5	8	...	
Noon.	SSW $\frac{1}{2}$ W.	6	bc	3	29.758	52.8	49.8	80	54.7	6	...	
2.	S $\frac{1}{2}$ W.	6	oc	3	29.823	51.5	49.5	86	54.5	10	...	
4.	S $\frac{1}{2}$ E.	7	oc	4	29.842	50.0	47.3	82	54.0	10	...	
6.	S $\frac{1}{2}$ W.	6	bc	3	29.884	48.8	46.8	86	54.5	9	...	
8.	S $\frac{1}{2}$ W.	7	bc	4	29.929	49.3	46.0	78	53.7	8	...	
10.	S $\frac{1}{2}$ W.	5	bc	4	29.929	47.8	47.3	97	53.7	4	...	Sp. gr. 1.02600.
Midt.	S $\frac{1}{2}$ W.	7	oc	4	29.977	47.8	45.8	86	53.8	9	...	
Totals.	...	69	...	36	97.09	616.5	111.2	1029	50.3	81	...	
Mean.	swbs.	6	eq	3	29.809	51.4	49.3	86	54.6	7	...	Cum. & Cum str.

## MONDAY, 13TH.

2.	S $\frac{1}{2}$ W.	4	bc	3	30.026	47.3	44.5	80	53.0	8	...	At noon, lat. 36° 7' S. long. 14° 27' W. Temperature by self-registering thermo- meter, max. 49° 5', min. 43° 8'. Current, N. 6° E. 30.
4.	S $\frac{1}{2}$ W.	5	bc	3	30.056	46.5	42.8	75	54.0	7	...	
6.	SE $\frac{1}{2}$ E.	6	bc	3	30.100	46.8	43.8	79	...	7	...	
8.	SE $\frac{1}{2}$ E.	5	bc	3	30.130	47.5	43.3	72	52.8	7	...	
10.	SE $\frac{1}{2}$ E.	6	bc	3	30.170	47.5	43.3	72	53.5	7	...	
Noon.	SE $\frac{1}{2}$ E.	4	bc	3	30.165	47.8	42.8	67	53.7	5	...	
2.	S $\frac{1}{2}$ E.	3	bc	3	30.177	46.8	42.8	73	55.0	3	...	
4.	S $\frac{1}{2}$ E.	4	bc	3	30.185	47.8	44.0	74	55.0	2	...	
6.	S $\frac{1}{2}$ W.	3	bc	2	30.212	47.8	42.8	67	55.0	5	...	
8.	SW $\frac{1}{2}$ S.	4	bc	2	30.252	46.8	42.8	73	55.0	5	...	S p.m., light passing showers.
10.	SE $\frac{1}{2}$ E.	3	bc	2	30.270	46.8	42.8	73	54.5	5	...	
Midt.	SE $\frac{1}{2}$ E.	5	bc	2	30.287	46.8	43.8	79	54.0	5	...	
Totals.	...	52	...	32	2930	86.2	39.5	884	45.5	66	...	Cir cum. Cum.
Mean.	S $\frac{1}{2}$ E.	4	bc	3	30.169	47.2	43.3	74	54.1	5	...	

## TUESDAY, 14TH.

2.	S $\frac{1}{2}$ W.	4	bc	2	30.287	46.3	42.8	76	53.7	6	...	At noon, lat. 36° 12' S. long. 12° 18' W. Temperature by self-registering thermo- meter, max. 52° 7', min. 42° 0'. Current, N. 16°.
4.	SSW $\frac{1}{2}$ W.	3	bc	2	30.272	44.8	41.8	78	53.8	2	...	
6.	S.S.E.	2	bc	2	30.329	46.3	42.8	76	54.0	7	...	
8.	S.S.W.	3	bc	2	30.377	45.8	43.3	82	55.0	4	...	
10.	S.E.	2	bc	2	30.414	46.3	43.8	83	55.0	5	...	
Noon.	S.	2	bc	2	30.409	47.8	43.8	73	55.0	3	...	
2.	S.	2	bc	2	30.407	48.8	43.8	67	55.0	4	...	
4.	S.	2	bc	2	30.411	50.8	44.3	61	55.2	6	...	
6.	S.	1	bc	2	30.450	47.8	43.8	73	55.0	3	...	
8.	S.	1	bc	2	30.485	47.3	43.3	73	53.5	7	...	Sp. gr. 1.02616.
10.	S.S.W.	2	oc	2	30.490	47.3	41.8	64	53.5	7	...	
Midt.	W.S.W.	4	oc	2	30.479	47.8	43.8	73	53.5	8	...	
Totals.	...	28	...	24	4810	87.1	39.1	39	52.2	62	...	Cir. Cum. & Nimb.
Mean.	S $\frac{1}{2}$ W.	2	bc	2	30.401	47.3	43.3	73	54.3	5	...	

## WEDNESDAY, 15TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower	
2.	wbN.	4	oc	...	30.465	46.8	42.8	73	53.5	9	...	Str.	...	At Tristan island. Temperature by self-registering thermo- meter, max. 55°, min. 46°. 8 A.M., anchored off Tristan island.
4.	w.s.w.	4	oc	...	30.459	47.8	41.3	60	53.0	10	...	Str.	...	
6.	w.s.w.	5	bcp	...	30.456	48.3	44.8	76	53.0	9	...	Cum str.	...	
8.	w.s.w.	4	be	...	30.472	51.8	48.3	77	53.8	4	...	Cum str.	...	
10.	w.	5	be	1	30.459	52.8	48.8	74	...	6	...	Cum.	...	
Noon.	wbN.	4	be	1	30.453	52.8	48.8	74	...	7	...	Cum.	...	
2.	wbN.	5	ocpq	...	30.421	51.5	50.3	92	...	10	...	Cum.	...	
4.	s.w.	4	be	...	30.435	52.8	49.3	77	...	7	...	Cum.	...	
6.	s.w.	4	be	...	30.443	51.8	48.3	77	...	7	...	Cum str.	...	
8.	s.w.	4	be	1	30.490	51.3	46.8	71	53.5	7	...	Cum str.	...	
10.	s.w.	3	e	1	30.533	50.8	47.8	80	53.2	10	...	Cm.&Nb.	...	5 P.M., left Tristan for inaccessible island.
Midd.	s.w.	12	be	1	30.532	50.3	47.3	80	53.2	8	...	Cm.&Nb.	...	
Totals.	...	48	bcpq	13	561.8	8.8	84.6	911	22	94	...	Cum., Str., & Nimb.		
Mean.	w.s.w.	4		1	30.468	50.7	47.0	76	53.3	8	...			

## THURSDAY, 16TH.

2.	s.s.w.	4	oc	...	30.526	49.8	45.8	74	53.5	8	...	Cm.&Nb.	...	At Inaccessible island. Temperature by self-registering thermo- meter, max. 54° 5', min. 48° 0'. 8 A.M., anchored off Inaccessible island.
4.	s.s.w.	2	oc	...	30.462	49.8	46.0	75	53.5	8	...	Cum.	...	
6.	s.s.w.	4	oc	...	30.515	49.8	45.8	74	...	10	...	Str.	...	
8.	s.s.w.	2	oc	...	30.551	48.8	45.8	79	...	10	...	Str.	...	
10.	s.E.	1	ocd	...	30.580	50.3	47.8	83	...	10	...	Cum.	...	
Noon.	s.E.	2	oc	...	30.605	50.8	48.3	83	...	10	...	Cum.	...	
2.	s.	3	be	...	30.540	52.3	48.3	74	...	8	...	Cum.	...	
4.	s.	12	e	...	30.540	49.8	47.3	83	...	9	...	Cum.	...	
6.	s.s.w.	3	e	...	30.540	50.3	46.8	77	54.0	10	...	Cum.	...	
8.	s.s.w.	1	...	...	30.576	50.0	45.8	73	...	...	...	Cum.	...	
10.	E.	2	be	...	30.578	49.8	45.8	74	...	7	...	Cum.	...	
Midd.	Variable.	1	be	...	30.580	48.8	45.8	79	...	8	...	Cum.	...	
Totals.	...	27	e	...	659.3	0.3	79.3	88	11.0	98	...	Cum.		
Mean.	s.s.E.	2		...	30.549	50.0	46.6	77	53.7	9	...			

## FRIDAY, 17TH.

2.	Variable.	1	be	...	30.553	48.5	45.0	76	53.5	3	...	Nimb.	...	At Nightingale island. Temperature by self-registering thermo- meter, max. 56°, min. 49°. 5 A.M., left Inaccessible island for Nightingale island, steaming round do. all day.
4.	Variable.	1	bom	...	30.525	49.8	45.8	74	...	7	...	Cum.	...	
6.	w.s.w.	1	be	...	30.518	49.8	46.8	80	...	9	...	Cum.	...	
8.	s.w.	3	oc	...	30.522	50.5	47.8	82	53.5	10	...	Cum.	...	
10.	s.w.	2	oc	...	30.514	50.3	48.8	90	54.0	10	...	Cum.	...	
Noon.	s.w.	3	oc	...	30.501	51.8	48.8	80	54.2	10	...	Cum.	...	
2.	w.	1	be	...	30.464	53.8	49.8	74	54.0	7	...	Cum str.	...	
4.	s.s.w.	2	be	...	30.451	52.8	48.8	74	54.0	8	...	Cum.	...	
6.	s.s.w.	1	e	...	30.465	52.8	48.8	74	...	10	...	Cum.	...	
8.	s.s.w.	1	oc	...	30.476	51.8	46.8	69	...	10	...	Cum.	...	7 P.M., hove to off Nightingale island.
10.	Variable.	1	oc	...	30.481	51.8	47.3	72	53.7	10	...	Cum.	...	
Midd.	s.w.	1	oc	...	30.462	51.3	46.3	68	53.2	10	...	Cum.	...	
Total.	...	18	e	...	503.2	15.0	90.8	913	30.1	104	...	Cum.		
Mean.	s.w.	1		...	30.494	51.2	47.6	76	53.8	9	...			

## SATURDAY, 18TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, ft to ft	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, octo 10	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower	
2.	W.S.W.	1	oe	...	30.413	50.8	46.3	71	53.5	9	...	Cum.	At noon, lat. 37° 17' S., long. 12° 23' W. Temperature by self-registering thermo- meter, max. 55°, min. 49°.
4.	N.W.	1	ocm	...	30.402	50.8	45.8	68	53.2	10	...	Cum.	
6.	W.	2	e	...	30.414	49.8	45.8	74	53.0	10	...	Cum str.	
8.	W.	2	e	...	30.402	50.0	47.8	85	53.0	10	...	Cum str.	
10.	W.S.W.	2	e	...	30.377	52.3	48.8	79	53.5	9	...	Cum.	
Noon.	W.S.W.	2	e	...	30.360	51.8	48.5	79	53.5	10	...	Cum str.	
2.	W.S.	2	oe	...	30.303	53.8	49.8	74	54.0	10	...	Cum str.	
4.	W.S.W.	3	bc	...	30.255	52.8	49.8	80	54.0	6	Cir str.	Cum.	
6.	W.S.W.	5	e	...	30.233	51.8	48.8	80	53.8	9	...	Cum.	
8.	W.S.W.	3	cd	...	30.233	51.8	49.8	86	53.5	10	...	Cum.	
10.	S.W.	4	oeq	...	30.255	52.3	48.8	77	53.5	7	...	Cum.	6 p.m., left the Tristan da Cunha group for the Cape of Good Hope.
Midd.	Variable.	3	oeq	...	30.247	51.8	49.5	85	53.0	8	...	Cum.	
Totals.	...	30	...	...	3924	19.8	39.5	937	41.5	108	...	...	
Mean.	W.S.W.	2	...	...	30.327	51.6	48.3	78	53.5	9	Cir str.	Cum. & Cum str.	

## SUNDAY, 19TH.

2.	W.	4	oe	...	30.470	52.8	48.8	74	53.5	10	...	Str.	At noon, lat. 37° 5' S., long. 9° 40' W. Temperature by self-registering thermo- meter, max. 56° 8', min. 49°.
4.	W.	4	oe	...	30.154	52.8	48.8	74	53.5	9	...	Str.	
6.	W.	4	bc	...	30.129	52.3	49.3	80	53.0	9	...	Cum.	
8.	W.S.W.	4	bc	...	30.138	53.3	50.8	83	53.0	9	...	Cum.	
10.	W.S.	5	bc	...	30.131	54.3	48.8	87	53.5	7	Cir cum.	Str.	Sp. gr. 1.02622.
Noon.	W.S.	4	bc	...	30.090	54.8	51.5	79	53.7	7	Cir cum.	Cum & Str.	
2.	W.S.	4	bc	...	30.095	55.8	52.5	80	53.0	7	Cir cum.	Cum & Str.	
4.	W.	4	e	...	30.090	55.5	52.5	82	53.0	9	Str.	Cum str.	
6.	W.S.W.	4	e	...	30.090	52.8	51.8	93	53.7	9	...	Cum str.	
8.	S.W.	2	e	...	30.110	51.8	50.3	90	53.7	10	...	Cum & Nb.	
10.	Variable.	3	opl	...	30.141	51.8	49.5	85	53.5	10	...	Cum.	
Midd.	Variable.	2	e	...	30.156	51.8	49.8	86	53.0	10	...	Cum.	
Totals.	...	46	...	16	1503	39.6	44	973	40.1	166	Cir cum. & Str.	Cum. & Cum str.	
Mean.	W.	4	...	2	30.125	53.3	50.4	81	53.3	9	...	...	

## MONDAY, 20TH.

2.	S.W.S.	2	e	2	30.141	50.8	47.8	86	53.5	8	...	Cum.	At noon, lat. 36° 43' S., long. 7° 13' W. Temperature by self-registering thermo- meter, max. 56° 8', min. 51°.
4.	Calm.	0	e	2	30.115	51.3	47.8	77	53.5	9	...	Cum.	
6.	W.S.W.	1	e	1	30.089	51.8	48.8	80	53.5	10	...	S.W. Cum.	
8.	S.	2	cp	1	30.075	52.5	50.8	88	53.8	10	...	S.W. Cum.	
10.	S.W.	2	oeq	2	30.060	53.8	51.8	86	53.8	10	...	Cum str.	Sp. gr. 1.02616.
Noon.	S.W.	2	oe	2	30.035	55.0	53.0	87	54.5	10	...	Cum str.	
2.	W.S.W.	2	cp	1	29.982	54.5	53.0	90	54.5	10	...	Cum.	
4.	W.S.W.	2	er	1	29.926	54.5	52.8	88	54.5	10	...	Cum.	
6.	W.S.W.	4	er	1	29.918	54.0	52.0	86	...	10	...	Nimb.	
8.	W.S.W.	4	er	1	29.900	53.3	52.5	94	54.5	10	...	Nimb.	
10.	W.S.W.	3	er	1	29.859	53.8	53.3	97	54.7	10	...	Cum & Nb.	
Midd.	S.S.W.	5	er	1	29.774	53.8	53.3	97	54.5	10	...	Cum & Nb.	
Totals.	...	29	...	16	11872	39.1	16.9	1050	45.3	117	...	...	
Mean.	W.S.W.	2	...	1	29.989	53.3	51.4	87	54.4	10	...	Cum. & Nimb.	

## TUESDAY, 21st OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer		Humidity, Sat. 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N.	5	ocr	3	29.699	53.8	53.8	100	...	10	...	Nimb.	At noon, lat. 36° 47' s. long. 4° 14' w. Temperature by self-registering thermometer, max. 55°, min. 49°. Current, S. 61° E. 6'. 7 A.M., wind shifted to S.W. and freshened.
4.	N.	4	ocr	3	29.676	54.0	53.8	99	53.5	10	...	Nimb.	
6.	N.	3	ocq	2	29.656	54.8	54.8	100	53.5	10	...	Nimb.	
8.	S.	4	ocqm	2	29.727	53.3	53.0	98	53.5	10	...	Nimb.	
10.	S.W.	7	ocqm	3	29.765	50.8	49.3	90	54.0	10	...	Str.	
Noon.	S.W.	6	bcq	3	29.793	51.3	48.8	83	53.7	8	...	Cum & Cum str.	
2.	S.W.	7	bcq	4	29.815	50.8	47.8	80	53.8	6	...	Cum str.	
4.	S.W.	5	bcq	4	29.836	49.3	46.3	79	53.5	6	...	Cum str.	
6.	S.W.	6	bc	4	29.921	48.8	44.8	73	54.0	6	...	Cum.	
8.	S. S. E.	7	ocq	4	30.015	48.3	44.8	76	54.0	6	...	Cum.	
10.	S. S. E.	6	oc	3	30.068	48.8	44.8	73	54.0	9	...	Str.	
Midt.	S. E. S.	4	bc	3	30.094	48.0	43.3	68	54.0	8	...	Str. & Cum str.	
Totals.	...	64	bcqm	38	10065	12.0	105.3	1019	41.5	99	...	Nimb. & Cum str.	
Mean. Variable.	...	5		3	29.839	51.0	48.8	85	53.8	8	...		

## WEDNESDAY, 22d.

2.	S. S. E.	4	ocpq	3	30.098	47.8	44.3	76	53.7	8	...	Cum. & Nib.	At noon, lat. 35° 57' s. long. 0° 15' w. Temperature by self-registering thermometer, max. 51° 5', min. 47° 5'. Current, S. 29°.
4.	S. E.	3	bc	3	30.084	47.8	43.8	73	53.7	6	...	Cum.	
6.	S. S. E.	3	bc	3	30.197	47.8	43.8	73	53.7	6	...	Cum.	
8.	S. S. E.	3	bc	2	30.246	48.8	44.3	70	56.5	9	...	Cum str.	
10.	S.	3	c	2	30.284	48.3	45.3	73	56.5	10	...	Cum.	
Noon.	S.	3	c	2	30.291	50.3	46.5	75	56.5	10	...	Cum.	
2.	S.W.	2	c	2	30.266	50.8	46.8	74	56.5	10	...	Cum.	
4.	S.W.	2	c	2	30.276	50.8	46.8	74	56.5	10	...	Cum.	
6.	S. S. W.	2	c	2	30.317	50.3	46.3	74	56.0	10	...	Cum.	
8.	S.W. S.	2	c	2	30.355	50.0	46.5	77	56.0	10	...	Cum.	
10.	S. S. W.	3	c	2	30.379	50.8	46.8	74	56.0	9	...	Cum.	
Midt.	S. W.	1	c	2	30.375	50.8	47.3	77	56.0	9	...	Cum.	
Totals.	...	31	c	27	3168	115.3	68.5	50	67.6	107	...	Cum.	
Mean.	S.	3		2	30.294	49.6	45.7	74	55.6	9	...		

## THURSDAY, 23d.

2.	sw <sup>1</sup> / <sub>2</sub> W.	1	o	1	30.355	50.5	46.8	76	55.7	10	...	Str.	At noon, lat. 35° 59' s. long. 1° 34' E. Temperature by self-registering thermometer, max. 55° 5', min. 51° 0'. Current, S. 51°, E 19°.
4.	sw <sup>1</sup> / <sub>2</sub> S.	2	o	1	30.357	50.5	46.8	76	55.7	10	...	Str.	
6.	sw <sup>1</sup> / <sub>2</sub> W.	2	o	1	30.381	50.8	46.8	74	55.7	10	...	Cum.	
8.	sw <sup>1</sup> / <sub>2</sub> W.	1	o	1	30.371	52.8	51.0	87	55.7	10	...	Cum.	
10.	wh <sup>1</sup> / <sub>2</sub> S.	1	e	1	30.407	52.3	48.5	75	56.0	10	...	Cum.	
Noon.	sw <sup>1</sup> / <sub>2</sub> W.	1	e	1	30.384	54.3	49.8	72	56.0	10	...	Cum.	
2.	sw <sup>1</sup> / <sub>2</sub> W.	2	c	1	30.360	54.3	50.5	76	56.2	10	...	Cum.	
4.	sw <sup>1</sup> / <sub>2</sub> W.	3	e	1	30.345	53.8	49.8	74	56.0	10	...	Cum.	
6.	sw <sup>1</sup> / <sub>2</sub> W.	3	e	1	30.316	53.8	49.8	74	56.0	10	...	Cum.	
8.	sw <sup>1</sup> / <sub>2</sub> W.	3	e	1	30.313	53.8	49.8	74	55.2	10	...	Cum.	
10.	sw <sup>1</sup> / <sub>2</sub> S.	4	e	1	30.322	54.0	50.0	74	54.0	10	...	Cum.	
Midt.	wh <sup>1</sup> / <sub>2</sub> W.	5	e	1	30.280	54.3	50.8	77	55.0	10	...	Cum.	
Totals.	...	28	oc	12	4191	35.2	110.4	69	67.2	120	...	Cum.	
Mean.	wh <sup>1</sup> / <sub>2</sub> S.	2		1	30.349	52.9	49.2	76	55.6	19	...		

## FRIDAY, 24TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNW $\frac{1}{2}$ W.	5	eq	2	30.230	54.8	51.3	78	56.2	9	...	Cum.	At noon, lat. 36° 2' s. long. 5° 11' E. Temperature by self-registering thermo- meter, max. 57° 9, min. 54° 5. Current, s. 38° E. 10'. Sp. gr. 1.02596.
4.	NW $\frac{1}{2}$ W.	6	eq	2	30.199	54.8	51.5	79	56.0	8	...	Cum.	
6.	NW $\frac{1}{2}$ W.	7	eq	3	30.180	54.8	51.8	81	55.0	9	...	Cum.	
8.	W $\frac{1}{2}$ N.	6	e	3	30.159	56.5	52.8	76	56.0	9	...	Cum.	
10.	NW $\frac{1}{2}$ N.	5	e	3	30.139	56.3	53.5	82	54.5	10	...	Cum.	
Noon.	NW $\frac{1}{2}$ W.	4	cp	3	30.105	55.8	53.8	87	54.0	10	...	Cum.	
2.	NW $\frac{1}{2}$ N.	5	e	3	30.089	56.0	53.5	84	53.5	10	...	Cum.	
4.	NW $\frac{1}{2}$ W.	4	or	3	30.065	55.0	53.8	92	52.5	10	...	Str.	
6.	NW $\frac{1}{2}$ W.	4	or	2	30.039	54.8	53.8	93	54.2	10	...	Nimb.	
8.	W $\frac{1}{2}$ N.	4	cp	2	30.034	54.8	54.0	94	54.2	10	...	Nimb.	
10.	W $\frac{1}{2}$ N.	4	o	2	30.027	54.8	54.3	97	54.2	10	...	Cm.&Nhb.	
Midd.	W $\frac{1}{2}$ N.	3	op	2	30.003	54.8	54.8	100	55.0	10	...	Nimb.	
Totals.	...	57	cp	30	1269	63.2	38.9	1043	55.3	115	...	Cum. & Nimb.	
Mean.	sw $\frac{1}{2}$ W.	5		2	30.106	55.3	53.2	87	54.6	9			

## SATURDAY, 25TH.

2.	Variable.	3	or	2	29.950	53.8	52.5	92	54.0	10	...	Str.	At noon, lat. 36° 22' s. long. 8° 12' E. Temperature by self-registering thermo- meter, max. 55°, min. 52°. Current, s. 38° E. 10'. 0.40 A.M., wind shifted suddenly from W $\frac{1}{2}$ N. to E.S.E. 4 A.M., bright stars just visible through the stratus clouds. Sp. gr. 1.02631.
4.	SSE $\frac{1}{2}$ E.	4	od	2	29.940	51.8	51.8	100	56.5	10	...	Str.	
6.	SSE $\frac{1}{2}$ E.	1	e	1	29.956	51.8	50.8	93	56.5	10	...	Cum.	
8.	SSE $\frac{1}{2}$ E.	1	e	1	29.955	52.8	51.3	90	56.0	10	...	Cum.	
10.	S $\frac{1}{2}$ E.	1	cpm	1	29.936	52.8	52.3	97	56.0	10	...	Cum.	
Noon.	S $\frac{1}{2}$ W.	1	be	1	29.906	53.8	50.8	80	56.2	6	...	Cum.	
2.	S $\frac{1}{2}$ W.	2	be	1	29.890	53.8	50.8	80	57.2	5	Cir cum.	Cum str.	
4.	S $\frac{1}{2}$ W.	2	be	1	29.880	54.3	50.8	77	59.0	4	Cir cum.	Cum str.	
6.	S $\frac{1}{2}$ W.	1	be	1	29.886	54.8	50.8	75	59.2	5	Cir.	Cum.	
8.	S $\frac{1}{2}$ W.	2	be	1	29.917	53.8	50.0	75	59.5	5	...	Cum.	
10.	W.	4	bcp	2	29.928	53.8	50.8	80	59.2	8	...	Cum.	
Midd.	W $\frac{1}{2}$ N.	3	bcp	2	29.910	54.8	51.8	81	59.2	9	...	Cum str.	
Totals.	...	25	bcpm	16	11054	42.1	14.5	1020	88.5	92	...	Cir cum.	Cum. & Str.
Mean.	S $\frac{1}{2}$ W.	2		1	29.921	53.5	51.2	85	57.4	8			

## SUNDAY, 26TH.

2.	W $\frac{1}{2}$ S.	3	eq	2	29.880	53.8	50.8	80	59.2	9	...	Cum str.	At noon, lat. 35° 59' s. long. 11° 43' E. Temperature by self-registering thermo- meter, max. 56°, min. 51° 8. Current, s. 11° W. 26'. Sp. gr. 1.02664.
4.	sw $\frac{1}{2}$ W.	4	eq	2	29.876	51.8	49.8	86	59.5	7	...	Cum str.	
6.	W $\frac{1}{2}$ S.	6	bcp	2	29.928	55.3	51.8	78	59.5	5	...	Cum str.	
8.	sw $\frac{1}{2}$ W.	6	bcp	2	29.955	54.3	50.8	77	60.0	8	Cir.	Cum.	
10.	sw $\frac{1}{2}$ S.	4	be	2	29.980	54.8	51.3	78	60.0	6	Cir.	Cum.	
Noon.	sw $\frac{1}{2}$ W.	5	be	2	30.012	54.5	52.0	83	60.0	6	...	Cum.	
2.	sw $\frac{1}{2}$ S.	4	bcp	3	30.013	53.8	49.8	74	58.7	8	...	Cm. & St.	
4.	sw $\frac{1}{2}$ S.	6	bcp	3	30.052	51.8	49.3	83	58.2	7	...	Cm. & St.	
6.	sw $\frac{1}{2}$ S.	6	bcp	3	30.070	51.8	47.3	72	55.5	7	...	Cum str.	
8.	sw $\frac{1}{2}$ W.	7	bcp	4	30.087	51.3	47.8	77	56.0	6	...	Cum.	
10.	S $\frac{1}{2}$ W.	6	bcp	4	30.138	51.3	47.3	74	57.5	6	...	Cum.	Midnight, wind puffly and unsteady in direction.
Midd.	sw $\frac{1}{2}$ S.	7	bcp	4	30.162	51.3	46.3	68	59.0	5	...	Cum.	
Totals.	...	64	bcp	33	1153	35.8	114.3	930	103.1	80	...	Cir.	Cum.
Mean.	s. w.	5		3	30.013	53.0	49.5	77	58.6	7			

## MONDAY, 27TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sswW.	7	bc	4	30.176	51.8	47.8	74	58.2	6	...	Cm.&Cmst	At noon, lat. 35° 35' s. long. 16° 8' E. Temperature by self-registering thermo- meter, max. 58° 2, min. 49° 8. Current, S. 18°, E. 25'.  Sp. gr. 1.02613.
4.	sbwW.	6	bc	4	30.181	51.3	48.8	83	58.0	5	...	Cum.	
6.	sbwW.	7	bc	5	30.231	51.8	47.8	71	58.2	4	...	Cum str.	
8.	sbwW.	6	bc	5	30.255	52.8	48.8	71	57.7	5	...	Cum str.	
10.	sbwW.	6	bc	5	30.320	53.5	48.8	71	56.5	6	...	Cum.	
Noon.	swbS.	6	bcp	5	30.361	54.3	48.3	61	56.0	6	...	Cum.	
2.	swbS.	5	bc	5	30.346	55.6	50.8	71	56.2	5	...	Cum.	
4.	swbS.	4	bc	5	30.358	56.8	51.8	70	56.2	4	...	Cum.	
6.	sswW.	3	bc	4	30.388	53.8	49.8	74	56.2	2	Cir.	Cum.	
8.	sSE.E.	3	bc	3	30.392	54.3	49.8	72	56.2	5	...	Cum str.	
10.	sSE.E.	2	bc	2	30.434	53.5	50.0	77	56.7	8	Cir.	Cum.	
Midt.	sSE.E.	1	bc	2	30.424	53.8	49.8	74	58.0	6	...	Cum.	
Totals.	...	56	bc	49	3866	43.3	112.3	38	84.1	62	Cir.	Cum. & Cum str.	
Mean.	sW.	5		4	30.322	53.6	49.4	73	57.0	5			

## TUESDAY, 28TH.

2.	sSE.E.	1	bc	2	30.388	53.8	50.8	80	57.8	5	...	Cum str.	At noon, lat. 34° 38' s. long. 18° 24' E. Temperature by self-registering thermo- meter, max. 63°, min. 54° 2.  Sp. gr. 1.02625.  4 P.M., anchored in Simon's bay, Cape of Good Hope.
4.	sSE.E.	2	oc	2	30.362	54.8	51.8	81	57.5	6	...	Cum.	
6.	sSE.E.	3	c	2	30.346	55.8	51.8	75	59.5	10	...	Cm.&Nb.	
8.	sSE.E.	3	oc	2	30.376	57.3	53.8	78	58.2	10	...	Cm.&Nb.	
10.	sSE.E.	3	bc	1	30.373	57.8	54.3	78	60.8	8	...	Cum str.	
Noon.	sSE.E.	3	bc	1	30.367	58.8	56.0	83	62.0	4	...	Cum.	
2.	sE.S.	4	bc	1	30.257	58.8	57.0	89	59.0	2	...	Cum.	
4.	sSE.E.	5	bcm	...	30.269	61.3	58.8	85	...	0	...	...	
6.	sE.S.	5	b	...	30.292	59.0	54.8	75	...	0	...	...	
8.	sE.S.	5	b	...	30.200	59.0	54.8	75	...	0	...	...	
10.	sE.S.	6	b	...	30.178	57.8	54.8	81	...	0	...	...	
Midt.	sE.S.	5	b	...	30.171	56.8	54.3	84	...	0	...	...	
Totals.	...	45	bc	11	3369	91.0	53.0	964	114.8	45	...	Cum. & Cum str.	
Mean.	s.E.	4		2	30.281	57.6	54.4	80	59.3	4			

## WEDNESDAY, 29TH.

2.	sSE.E.	6	b	...	30.143	56.8	54.3	81	...	0	...	...	At Simon's bay, Cape of Good Hope. Temperature by self-registering thermo- meter, max. 71°, min. 56° 8.
4.	sE.E.	6	b	...	30.123	56.8	54.3	81	...	0	...	...	
6.	sE.E.	8	b	...	30.093	57.8	53.8	76	...	0	...	...	
8.	sSE.E.	5	bc	...	30.085	60.8	56.8	77	...	2	Cir.	...	
10.	sE.E.	4	b	...	30.085	64.5	56.8	60	...	0	...	...	
Noon.	sE.E.	3	bc	...	30.064	67.8	61.8	68	...	1	Cir.	...	
2.	sE.E.	4	bc	...	30.022	69.3	61.8	62	...	1	Cir.	Str.	
4.	sE.S.	3	bc	...	29.998	70.3	61.8	59	...	1	Cir.	Str.	
6.	sE.E.	5	bc	...	29.992	67.8	61.3	66	...	2	Cir.	...	
8.	sE.E.	5	bc	...	29.995	67.0	60.8	67	...	3	Cir str.	Str.	
10.	sE.E.	4	bc	...	29.978	65.8	58.8	64	...	5	Cir str.	...	
Midt.	sE.E.	3	b	...	30.003	66.8	58.8	60	...	0	...	...	
Totals.	...	56	bc	...	581	1.5	101.1	827	...	15	Cir str.	Str.	
Mean.	s.E.	5		...	30.048	64.3	58.4	69	...	1			

## THURSDAY, 30TH OCTOBER 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	SE $\frac{1}{2}$ E.	3	bc	...	29.899	65.5	58.0	62	...	3	Cir.	Str.	In Simon's bay, Cape of Good Hope. Temperature by self-registering thermo- meter, max. 71°5, min. 61°5.
4.	SE $\frac{1}{2}$ E.	4	b	...	29.874	64.5	58.3	66	...	0	...	...	
6.	SE $\frac{1}{2}$ E.	4	bc	...	29.875	63.0	58.8	76	...	4	Cir str.	...	
8	SE $\frac{1}{2}$ E.	4	bc	...	29.866	64.3	60.3	77	...	4	Cir.	...	
10.	SE $\frac{1}{2}$ E.	4	bc	...	29.863	67.3	62.8	76	...	2	Cir.	...	
Noon.	SE $\frac{1}{2}$ E.	4	bc	...	29.861	68.8	64.0	74	...	3	Cir.	...	
2.	SE $\frac{1}{2}$ E.	4	bc	...	29.855	69.8	64.3	71	...	3	Cir.	...	
4.	SE $\frac{1}{2}$ E.	4	bc	...	29.860	69.8	63.8	69	...	2	Cir.	Str.	
6.	SE $\frac{1}{2}$ E.	4	bc	...	29.873	65.8	63.8	88	...	2	Cir.	Str.	
8.	SE $\frac{1}{2}$ E.	2	bc	...	29.883	64.8	61.8	83	...	1	Str.	Cum.	
10.	NE $\frac{1}{2}$ N.	1	bc	...	29.883	64.3	60.8	80	...	1	...	Cum.	
Midt.	SE $\frac{1}{2}$ W.	2	bc	...	29.923	63.8	60.8	82	...	4	...	Cum.	
Totals.	...	40	bc	...	10315	71.7	17.5	904	...	29	Cir str.	Str. & Cum.	
Mean.	SE $\frac{1}{2}$ E.	3		...	29.876	66.0	61.5	75	...	2			

## FRIDAY, 31st.

2.	NE $\frac{1}{2}$ N.	1	bc	...	29.935	63.3	60.8	85	...	5	...	Cum.	In Simon's bay, Cape of Good Hope. Temperature by self-registering thermo- meter, max. 68°, min. 60°.
4.	swb <sup>1</sup> w	1	c	...	29.953	62.8	61.3	91	...	7	...	Cum.	
6.	swb <sup>1</sup> w.	1	bep	...	30.010	63.3	61.8	91	...	5	...	Cum str.	
8.	swb <sup>1</sup> w.	2	cd	...	30.040	62.8	60.8	88	...	8	...	Cum str.	
10.	swb <sup>1</sup> w.	3	cp	...	30.074	63.3	59.8	89	...	10	...	Cum.	
Noon.	swb <sup>1</sup> w.	4	bc	...	30.087	64.8	59.8	73	...	8	...	Cum.	
2.	swb <sup>1</sup> w.	3	bc	...	30.084	66.8	61.8	73	...	6	Cir str.	Cum.	
4.	swb <sup>1</sup> w.	12	bc	...	30.086	65.8	58.8	64	...	6	...	Cum.	
6.	swb <sup>1</sup> w.	3	bc	...	30.112	61.8	56.8	72	...	8	...	Cum.&Str.	
8.	swb <sup>1</sup> w.	2	bep	...	30.064	59.8	57.8	88	...	9	Cir str.	Cum.	
10.	swb <sup>1</sup> w.	1	bep	...	30.130	59.8	57.8	88	...	9	...	Cum.	
Midt.	swb <sup>1</sup> w.	1	c	...	30.151	58.8	54.8	76	...	8	...	Cum.	
Totals.	...	24	bep	...	726	33.1	112.1	969	...	89	Cir str.	Cum. & Cum str.	
Mean.	swb <sup>1</sup> w.	2		...	30.061	62.8	59.3	81	...	7			

## SATURDAY, 1st NOVEMBER 1873.

2.	sbw.	1	bc	...	30.153	56.8	52.8	75	...	7	...	Cum.	In Simon's bay, Cape of Good Hope. Temperature by self-registering thermo- meter, max. 70°, min. 56°.
4.	sbw.	1	bc	...	30.160	56.3	52.8	78	...	7	...	Cum.	
6.	s.	3	bc	...	30.198	57.8	52.8	71	...	1	Cir.	Cum.	
8.	sbw.	1	bc	...	30.238	61.8	54.8	62	...	...	...	Cum.	
10.	fb $\frac{1}{2}$ s.	2	bc	...	30.231	63.8	56.8	63	...	...	...	Cum.	
Noon.	s.s.w.	1	bc	...	30.231	59.8	57.8	88	...	...	...	Cum.	
2.	s.s.w.	1	bc	...	30.253	60.8	57.8	82	...	...	...	Cum.	
4.	sbw.	2	bc	...	30.243	60.8	59.3	91	...	...	...	Cum.	
6.	SE $\frac{1}{2}$ S.	2	bc	...	30.251	61.3	55.8	70	...	1	Cir.	Cum.	
8.	SE $\frac{1}{2}$ S.	2	bc	...	30.227	60.8	55.8	72	...	...	...	Cum.	
10.	SE $\frac{1}{2}$ E.	3	bc	...	30.239	60.8	55.8	72	...	...	...	Cum.	
Midt.	SE $\frac{1}{2}$ E.	4	bc	...	30.217	60.8	55.8	72	...	...	...	Cum.	
Totals.	...	23	bc	...	2641	1.6	68.1	56	...	16	Cir.	Cum.	
Mean.	s <sup>1</sup> e.	2		...	30.220	60.1	55.7	75	...	4			

## SUNDAY, 2D NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE 1/2 E.	4	bc	...	...	58.8	55.3	79	...	...	...	Cum.	At Simon's bay. Temperature by self-registering thermometer, max. 83°, min. 59°.
4.	SE 1/2 E.	3	bc	...	30.149	58.8	55.3	79	...	...	...	Cum.	
6.	SE 1/2 S.	7	bcm	...	30.150	58.8	55.8	82	...	1	...	Cum.	
8.	SE 1/2 S.	5	bcm	...	30.132	62.8	57.8	72	...	4	Cir str.	...	
10.	SE 1/2 S.	4	...	...	30.123	61.8	59.8	88	...	...	...	...	
Noon.	SE 1/2 S.	3	bc	...	30.076	70.8	62.8	61	...	...	...	Cum. & Str.	
2.	SE 1/2 S.	2	bc	...	...	75.8	64.8	52	...	...	...	Cum.	
4.	SE 1/2 S.	1	bc	...	29.984	77.8	67.8	56	...	...	...	Cum.	
6.	NNW 1/2 W.	1	bc	...	29.977	72.8	65.8	66	...	1	Str.	...	
8.	NNW 1/2 W.	1	bc	...	29.962	67.8	62.8	73	...	...	...	Cir.	
10.	W 1/2 S.	1	bc	...	...	64.8	61.3	81	...	...	...	...	
Midt.	W 1/2 S.	1	bc	...	...	63.8	59.8	77	...	...	...	...	
Totals.	...	33	bcm	...	553	74.6	9.1	866	...	6	...	...	
Mean. Variable.	...	3		...	30.069	66.2	60.8	72	...	2	Cir str.	Cum.	

## MONDAY, 3d.

2.	SW 1/2 W.	1	bc	...	29.907	67.3	60.8	66	...	...	...	...	At Simon's bay. Temperature by self-registering thermometer, max. 83°, min. 66°.
4.	SW 1/2 W.	2	bc	...	29.897	67.3	60.8	66	...	...	...	...	
6.	NE 1/2 E.	1	bcm	...	29.933	66.8	62.8	78	...	0	...	...	
8.	SE 1/2 E.	2	bc	...	...	67.8	63.8	70	...	...	...	...	
10.	SE 1/2 W.	2	bc	...	...	68.3	63.8	76	...	...	...	...	
Noon.	SW 1/2 W.	2	bc	...	30.001	68.8	63.8	73	...	...	...	...	
2.	SW 1/2 W.	1	bc	...	29.990	71.8	68.3	81	...	...	...	...	
4.	SE 1/2 S.	1	bc	...	29.992	7.3	69.8	61	...	...	...	...	
6.	SW 1/2 W.	2	bc	...	30.015	67.8	61.8	68	...	0	...	...	
8.	SW 1/2 S.	2	bc	...	30.021	67.8	57.8	52	...	...	...	...	
10.	SE 1/2 S.	1	bc	...	30.054	62.0	57.8	76	...	...	Cir str.	...	
Midt.	SE 1/2 E.	1	bc	...	30.047	61.8	58.8	82	...	...	...	...	
Totals.	...	18	bc	...	9857	95.8	28.6	849	...	...	Not registered.	...	
Mean. Variable.	...	1		...	29.986	68.0	62.4	71	...	...	...	...	

## TUESDAY 4TH.

2.	SE 1/2 E.	2	bc	...	30.026	61.8	58.3	80	...	...	...	...	At Simon's bay. Temperature by self-registering thermometer, max. 75°, min. 61°.
4.	SE 1/2 E.	1	bc	...	30.019	60.8	58.3	85	...	...	Cir str.	...	
6.	Calms.	0	bc	...	29.979	63.8	59.8	77	...	4	Cir str.	...	
8.	SE 1/2 S.	1	bc	...	29.983	65.8	60.8	75	...	3	Cir str.	...	
10.	...	...	b	...	29.973	60.8	62.8	65	...	...	...	...	
Noon.	SW 1/2 W.	1	b	...	29.933	60.8	63.8	69	...	0	...	...	
2.	SW 1/2 W.	2	b	...	29.890	72.3	65.8	67	...	0	...	...	
4.	SW 1/2 W.	3	bc	...	29.878	70.8	63.8	65	...	2	...	Cum.	
6.	SW 1/2 W.	2	bc	...	29.906	65.3	61.8	81	...	3	...	Cum.	
8.	SW 1/2 W.	1	bc	...	29.946	62.3	59.8	85	...	...	...	...	
10.	SW 1/2 W.	1	bc	...	29.943	61.3	59.8	91	...	4	...	Cum.	
Midt.	SW 1/2 W.	1	bc	...	29.959	61.8	58.8	82	...	3	...	Cum.	
Totals.	...	15	bc	...	11396	65.6	13.6	920	...	19	...	...	
Mean. Variable.	...	1		...	29.949	65.5	61.1	77	...	2	Cir str.	Cum.	

## WEDNESDAY, 5TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- sult to 92° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	In Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w <sup>b</sup> s.	2	bc	...	29.864	58.8	53.8	71	...	...	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 67°, min. 58°5.
4.	w <sup>b</sup> s.	2	bc	...	29.864	58.8	56.3	85	...	...	...	...	
6.	sw <sup>b</sup> w.	1	bc	...	29.894	62.8	58.8	77	...	...	...	Cum.	
8.	sw <sup>b</sup> w.	3	bc	...	29.901	62.3	58.3	77	...	5	Cir.	Cum.	
10.	sw <sup>b</sup> w.	4	bc	...	29.919	63.8	58.8	72	...	5	Cir cum.	Cum.	
Noon.	sw <sup>b</sup> w.	3	oc	...	29.916	65.3	60.8	76	...	7	...	Cum.	
2.	w <sup>b</sup> s.	4	oc	...	29.960	59.8	58.3	91	...	10	...	Cm.&Nb.	
4.	w.s.w.	3	oc	...	29.991	59.8	56.8	82	...	10	...	Cm.&Nb.	
6.	w.s.w.	2	...	...	30.010	58.8	55.3	79	...	...	...	Cum.	
8.	w <sup>b</sup> s.	1	bc	...	30.037	57.8	53.8	76	...	7	Str.	Cum str.	
10.	w.s.w.	2	bc	...	30.068	57.8	53.8	76	...	...	...	Cum.	Totals.
Midt.	sw <sup>b</sup> w.	1	bc	...	30.068	57.3	53.8	78	...	...	...	Cum.	
Totals.	...	28	bc	...	11492	723.1	78.6	940	...	48	Cir. & Str.	Cum. & Nimb.	
Mean.	w <sup>b</sup> s.	2		...	29.958	60.3	56.5	78	...	7			

## THURSDAY, 6TH.

2.	sw <sup>b</sup> s.	1	cd	...	30.067	57.3	54.8	84	...	10	...	Cum.	At Simon's bay. Temperature by self-registering thermo- meter, max. 65°, min. 57°.
4.	sw <sup>b</sup> s.	1	cd	...	30.063	56.8	54.8	87	...	10	...	Cum.	
6.	sw <sup>b</sup> s.	2	cp	...	30.063	56.8	54.8	87	...	9	...	Cm.&cmst.	
8.	sw <sup>b</sup> s.	2	bc	...	30.070	58.8	55.8	82	...	...	...	Cm.&cmst.	
10.	...	...	bc	...	...	...	...	...	...	9	...	...	
Noon.	Variable.	3	bc	...	30.072	62.8	58.8	77	...	9	Cir cum.	Cum.	
2.	sw <sup>b</sup> w.	2	oc	...	30.054	61.8	58.3	80	...	10	...	Cum.	
4.	sw <sup>b</sup> w.	1	oc	...	30.034	59.8	56.8	82	...	10	...	Cum str	
6.	sw <sup>b</sup> s.	1	...	...	30.065	59.8	56.8	82	...	...	...	...	
8.	sw <sup>b</sup> s.	1	oc	...	30.065	59.8	56.8	82	...	10	...	Cum.	
10.	sw <sup>b</sup> s.	1	c	...	30.043	59.8	55.8	76	...	10	...	Cum.	Totals.
Midt.	sw <sup>b</sup> s.	2	c	...	30.028	59.5	55.8	78	...	10	...	Cum.	
Totals.	...	17	cp	...	624	103.0	69.3	897	...	97	Cir cum.	Cum. & Cum str.	
Mean.	sw <sup>b</sup> e.	2		...	30.057	59.4	56.3	82	...	10			

## FRIDAY, 7TH.

2.	sw <sup>b</sup> e.	1	bc	...	30.019	59.8	56.3	79	...	8	...	Cum.	At Simon's bay. Temperature by self-registering thermo- meter, max. 67°, min. 57°.
4.	sw <sup>b</sup> w.	2	bc	...	30.019	58.3	55.8	84	...	7	Cir.	Cum.	
6.	s.s.w.	1	bc	...	30.034	57.8	54.8	81	...	7	...	...	
8.	sw <sup>b</sup> w.	2	bc	...	30.080	59.8	55.8	76	...	8	...	Cum.	
10.	sw <sup>b</sup> w.	2	bc	...	30.107	62.8	56.8	67	...	8	...	Cum.	
Noon.	sw <sup>b</sup> w.	2	bc	...	30.112	63.8	57.3	65	...	8	...	Cum.	
2.	sw <sup>b</sup> w.	1	bc	...	30.106	66.3	58.8	62	...	7	Cir.	Cum str.	
4.	w.s.w.	2	bc	...	30.112	64.8	57.8	63	...	6	Cir.	Str.	
6.	sw <sup>b</sup> w.	1	bc	...	30.109	61.8	55.8	67	...	4	...	Str.	
8.	Calm.	0	bc	...	30.155	57.3	53.8	78	...	3	...	Cum.	Totals.
10.	Calm.	0	bc	...	30.174	59.3	55.8	79	...	4	...	Cum str.	
Midt.	Calm.	0	bc	...	30.192	58.8	56.3	85	...	6	...	Cm.&Str.	
Totals.	...	14	bc	...	1219	730.6	75.1	886	...	76	Cir.	Cum. & Str.	
Mean.	sw <sup>b</sup> s.	1		...	30.102	60.9	56.3	74	...	6			

## SATURDAY, 8TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of S. & S.W.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.W.	1	bc	...	30.115	57.8	54.8	81	...	...	...	Cum str.	At Simon's bay. Temperature by self-registering thermometer, max. 72°, min. 57°.
4.	W.S.	1	bc	...	30.167	56.8	54.3	84	...	...	...	Str.	
6.	S.W.	1	bc	...	30.179	58.3	54.8	78	...	...	...	Cir str.	
8.	S.E.½ E.	2	bc	...	30.173	62.3	56.8	70	...	6	...	Cir str.	
10.	S.E.½ E.	3	bc	...	30.177	63.8	57.8	67	...	7	...	Cir str.	
Noon.	S.E.½ E.	2	bc	...	30.196	66.3	59.3	64	...	8	...	Cir str.	
2.	S.E.½ E.	2	bc	...	30.207	65.8	59.8	68	...	...	...	Cir.	
4.	S.E.½ S.	3	bc	...	30.167	67.8	61.8	68	...	...	...	Cir cum.	
6.	S.E.½ S.	3	...	...	30.135	61.3	57.3	77	...	...	...	Cir cum.	
8.	S.E.½ E.	3	bc	...	30.125	60.3	55.8	74	...	3	...	...	
10.	S.E.½ S.	3	bc	...	30.115	59.8	55.8	76	...	...	...	...	
Midt.	S.E.½ E.	2	bc	...	30.115	59.8	56.3	79	...	...	...	...	
Totals.	...	26	bc	...	1871	20.1	84.6	886	...	28	...	...	Cir str. Cum.
Mean.	S.S.E.	2		...	30.156	61.7	57.0	74	...	6	...	...	

## SUNDAY, 9TH.

2.	S.E.½ E.	3	bc	...	30.102	59.8	56.3	79	...	...	...	Cum.	At Simon's bay. Temperature by self-registering thermometer, max. 69°, min. 59° 5.
4.	S.E.½ E.	2	bc	...	30.062	58.8	55.8	82	...	...	...	Cum.	
6.	S.E.½ E.	3	bc	...	30.063	61.8	57.8	77	...	2	...	Cum.	
8.	S.E.½ E.	2	bc	...	30.057	62.8	59.8	82	...	...	...	Cum.	
10.	S.E.½ E.	3	bc	...	30.098	65.8	59.8	68	...	...	...	Cum.	
Noon.	S.E.½ E.	4	bc	...	30.101	66.8	61.8	73	...	...	...	Cum.	
2.	S.E.½ E.	4	bc	...	30.104	67.8	61.8	68	...	4	...	Cir. Str. cum.	
4.	S.E.½ S.	5	bc	...	30.100	64.8	59.8	73	...	4	...	Cum.	
6.	S.E.½ S.	3	bc	...	30.109	62.8	58.8	77	...	...	...	Cir str.	
8.	S.E.½ E.	4	bc	...	30.109	61.8	57.8	77	...	...	...	Str.	
10.	S.E.½ S.	3	bc	...	30.122	61.3	57.8	80	...	3	...	Str.	
Midt.	S.E.½ E.	4	bc	...	30.126	60.8	57.3	80	...	3	...	Str.	
Totals.	...	40	bc	...	1153	35.1	104.6	916	...	16	...	...	Cir str. Cum. & Str.
Mean.	S.E.	3		...	30.096	62.9	58.7	76	...	3	...	...	

## MONDAY, 10TH.

2.	S.E.½ E.	4	bc	...	30.087	60.8	56.8	77	...	3	Str.	...	At Simon's bay. Temperature by self-registering thermometer, max. 70°, min. 60°.
4.	S.E.½ E.	3	bc	...	30.097	60.3	57.3	82	...	2	Str.	...	
6.	S.E.½ E.	5	bc	...	30.097	60.8	56.8	77	...	1	Cir.	...	
8.	S.E.½ E.	4	bc	...	30.097	...	...	...	...	...	...	...	
10.	S.E.½ E.	5	bc	...	30.075	64.8	58.8	68	...	2	...	...	
Noon.	S.E.½ E.	6	bc	...	30.041	65.8	59.8	68	...	1	...	Cum.	
2.	S.E.½ E.	5	bc	...	30.020	66.8	60.8	68	...	2	...	Cum.	
4.	S.E.½ S.	4	bc	...	30.012	68.8	61.8	64	...	...	...	Cum.	
6.	S.E.½ S.	3	bc	...	30.048	63.8	58.8	72	...	4	...	Cum.	
8.	S.E.½ S.	2	bc	...	30.047	62.8	57.8	72	...	...	...	...	
10.	S.W.	2	bc	...	30.062	61.8	58.8	82	...	3	...	Cum.	
Midt.	S.W.	2	bc	...	30.062	60.8	57.8	82	...	2	...	Cum.	
Totals.	...	45	bc	...	745	37.3	95.3	812	...	20	...	...	Cir str. Cum.
Mean.	S.E.½ S.	4		...	30.062	63.4	58.7	74	...	2	...	...	

## TUESDAY, 11TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to sea- level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	s.w.	2	bc	...	30.034	60.8	57.8	82	...	...	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 65°, min. 60°.
4.	s.w.	1	bc	...	30.014	60.8	57.8	82	...	...	...	...	
6.	s.w.	2	...	...	30.032	60.8	58.8	83	...	...	...	...	
8.	s.e.	1	bc	...	30.042	61.8	58.8	82	...	6	...	Cum.	
10.	s.w.	1	cr	...	30.061	61.8	58.8	82	...	7	...	Cum.	
Noon.	s.w.	2	bc	...	30.058	63.8	59.8	77	...	...	...	Cum.	
2.	s.w.	2	bc	...	30.062	65.3	59.8	71	...	4	...	Cum.	
4.	s.w.	1	bc	...	30.062	66.3	61.3	73	...	5	...	Cum.	
6.	s.w.	1	b	...	30.077	62.8	58.8	77	...	0	...	...	
8.	s.w.	1	bc	...	30.079	60.8	57.8	82	...	5	...	Cum.	
10.	s.w.	1	bc	...	30.112	60.8	56.8	77	...	5	Cir str.	Cum.	
Mid.	s.w.	2	bc	...	30.108	60.3	56.8	79	...	4	...	Cum.	
Totals.	...	17	bc	...	741	26.1	103.1	952	...	36			
Mean.	s.s.w.	1		...	30.062	62.2	58.6	79	...	4	Cir str.	Cum.	

## WEDNESDAY, 12TH.

2.	s.w.	2	bc	...	30.095	59.8	56.8	82	...	3	...	Cum.	At Simon's bay.
4.	s.e.	2	bc	...	30.086	58.8	56.3	82	...	3	...	Cum.	
6.	s.e.	2	bc	...	30.112	60.8	57.8	82	...	2	...	Cum.	
8.	s.e.	1	bc	...	30.136	63.3	60.3	82	...	2	...	Cum.	
10.	s.e.	3	bc	...	30.133	65.8	60.3	71	...	1	...	Cum.	
Noon.	s.e.	4	bc	...	30.108	67.8	60.8	64	...	1	...	Cum.	
2.	s.e.	6	bc	...	30.081	66.8	62.8	78	...	1	...	Cum.	
4.	s.e.	6	bc	...	30.087	65.8	61.8	78	...	1	...	Cum.	
6.	s.e.	5	bc	...	30.092	63.3	59.8	80	...	1	...	Cum.	
8.	s.e.	5	bc	...	30.112	61.8	58.8	82	...	1	...	Cum.	
10.	s.e.	5	bc	...	30.152	60.8	57.8	82	...	1	...	Cum.	
Mid.	s.e.	4	bc	...	30.154	60.8	56.8	77	...	2	...	Cum.	
Totals.	...	45	bc	...	1348	35.6	110.1	940	...	19			
Mean.	s.e.	4		...	30.112	63.0	59.2	78	...	2		Cum.	

## THURSDAY, 13TH.

2.	s.e.	4	bc	...	30.155	61.3	57.8	80	...	1	...	Cum.	At Simon's bay. Temperature by self-registering thermo- meter, max. 71°, min. 61°2.
4.	s.e.	4	bc	...	30.155	60.8	57.8	82	...	1	...	Cum.	
6.	s.e.	4	bc	...	30.157	61.8	58.8	82	...	1	...	Cum.	
8.	s.e.	4	...	...	30.170	...	...	...	...	...	...	...	
10.	s.e.	4	...	...	30.167	...	...	...	...	...	...	...	
Noon.	s.e.	5	bc	...	30.169	65.8	60.5	72	...	1	...	Cum.	
2.	s.e.	4	bc	...	30.141	67.8	62.8	73	...	1	...	Cum.	
4.	s.e.	3	b	...	30.134	67.3	62.3	73	...	0	...	...	
6.	s.e.	4	b	...	30.138	64.8	59.3	71	...	0	...	...	
8.	s.e.	4	b	...	30.149	62.8	58.8	77	...	0	...	...	
10.	s.e.	3	b	...	30.161	61.8	59.3	85	...	0	...	...	
Mid.	s.e.	2	b	...	30.172	60.8	58.3	85	...	0	...	...	
Totals.	...	45	bc	...	1868	35.0	95.7	780	...	5			
Mean.	s.e.	4		...	30.156	63.5	59.6	78	...	1		Cum.	

## FRIDAY, 14TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of sky, 0 to 9.	Barometer corrected to 32° and sea level.	Thermometer		Humidity, Sat. = 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E. 1/2 E.	3	b	...	30.132	61.8	57.8	77	...	0	...	...	At Simon's bay.  Clouds over land in the direction of Table Mountain.
4.	S.E. 1/2 E.	12	b	...	30.142	61.8	56.8	72	...	0	...	...	
6.	S.E. 1/2 E.	4	bc	...	30.162	62.8	58.8	77	...	1	Cir.	...	
8.	S.E. 1/2 E.	5	bc	...	30.154	64.8	60.3	75	...	3	Cir str.	...	
10.	S. 1/2 E.	4	bc	...	30.148	67.8	62.3	71	...	2	...	Cum.	
Noon.	S. 1/2 E.	12	bc	...	30.143	70.8	65.8	73	...	1	...	Cum.	
2.	S. 1/2 E.	12	bc	...	30.116	72.8	65.8	66	...	1	...	Cum.	
4.	S. 1/2 S.	3	bc	...	30.123	70.8	65.8	73	...	1	...	Cum.	
6.	S. 1/2 S.	12	bc	...	30.138	66.8	62.8	78	...	2	...	Str. cum.	
8.	S.S.E. 1/2 E.	12	bc	...	30.161	64.8	60.8	78	...	1	...	Cum.	
10.	S.E. 1/2 E.	12	b	...	30.130	64.3	60.8	80	...	0	...	...	Totals.
Midt.	S.E. 1/2 E.	12	b	...	30.137	63.8	61.3	85	...	0	...	...	
Totals.	...	33	bc	...	1626	73.1	19.1	65	...	12	Cir str.	Cum.	Mean.
Mean.	S.E. 1/2 S.	3		...	30.135	66.1	61.6	75	...	1			

## SATURDAY, 15TH.

2.	S.E. 1/2 E.	4	b	...	30.117	63.8	60.8	82	...	0	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 76°, min. 64°.
4.	S.E. 1/2 E.	12	bc	...	30.097	63.8	60.8	82	...	1	Str.	...	
6.	S.E. 1/2 E.	12	bc	...	30.087	64.3	61.8	85	...	1	...	Str.	
8.	S.E. 1/2 E.	12	b	...	30.098	65.8	61.8	78	...	0	...	...	
10.	S.E. 1/2 S.	3	b	...	30.090	68.8	62.8	68	...	0	...	...	
Noon.	S.E. 1/2 E.	12	b	...	30.068	70.8	64.8	69	...	0	...	...	
2.	S.E. 1/2 E.	3	bc	...	30.080	71.8	64.8	65	...	1	Cir.	...	
4.	S.S.E. 1/2 E.	4	bc	...	30.095	67.8	63.8	78	...	3	...	Cum.	
6.	S.E. 1/2 E.	12	bc	...	30.051	68.8	66.8	88	...	3	...	Cum.	
8.	S.E. 1/2 S.	12	bc	...	30.051	65.8	62.8	83	...	2	...	Cum.	Totals.
10.	S.E. 1/2 S.	3	bc	...	30.023	64.8	61.8	83	...	2	...	Cum.	
Midt.	S.E. 1/2 S.	2	bc	...	30.074	64.3	61.8	85	...	2	...	Cum.	Mean.
Totals.	...	31	bc	...	931	80.6	34.6	106	...	15	Cir str.	Cum.	Mean.
Mean.	S. E.	3		...	30.078	66.7	62.9	79	...	1			

## SUNDAY, 16TH.

2.	...	...	...	...	...	...	...	...	...	...	...	...	At Simon's bay.
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	S.E. 1/2 S.	4	e	...	30.029	63.8	60.8	82	...	8	Cir str.	...	
8.	S.S.E. 1/2 E.	5	e	...	29.982	65.8	61.8	78	...	10	Cir str.	...	
10.	S.E. 1/2 S.	5	bc	...	29.968	67.3	62.3	73	...	4	Cir str.	...	
Noon.	S.E. 1/2 S.	5	bc	...	29.965	69.3	63.8	71	...	3	Cir str.	...	
2.	S.S.E. 1/2 E.	4	bc	...	29.940	71.8	65.8	69	...	...	Cir str.	...	
4.	S.S.E. 1/2 E.	3	bc	...	29.940	72.8	66.8	70	...	...	Cir str.	...	
6.	S.E. 1/2 S.	4	bc	...	29.971	66.3	63.3	83	...	...	...	Cum.	
8.	S.E. 1/2 S.	3	bc	...	29.982	62.8	59.8	82	...	...	...	Cum.	Totals.
10.	S.E. 1/2 S.	4	b	...	29.983	64.3	61.8	85	...	0	...	...	
Midt.	S.E. 1/2 S.	5	b	...	29.986	63.3	61.3	88	...	0	...	...	Mean.
Totals.	...	42	bc	...	9747	67.5	27.5	781	...	25	Cir str.	Cum.	Mean.
Mean.	S.E. 1/2 S.	4		...	29.975	66.7	62.7	78	...	4			

## MONDAY, 17TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SEAS.	4	b	...	29.959	62.8	61.3	91	...	0	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 69° 7, min. 64° 0.
4.	SEAS.	5	b	...	29.939	62.8	60.8	88	...	0	...	...	
6.	SEAS.	4	b	...	29.945	62.8	60.8	88	...	0	...	...	Clouds capping the summits of the hills.
8.	SEAS.	5	b	...	29.953	64.8	61.8	83	...	0	...	...	
10.	SEAS.	6	bc	...	29.955	66.8	63.8	83	...	2	...	Cum.	Cum. Cum.
Noon.	SEAS.	7	bc	...	29.958	66.8	63.8	83	...	2	...	Cum.	
2.	SEAS.	6	bc	...	29.928	67.8	64.8	83	...	3	...	Cum.	Str. cum.
4.	SEAS.	8	bc	...	29.968	67.8	64.8	83	...	3	...	Str. cum.	
6.	SEAS.	7	bc	...	29.931	66.8	63.8	83	...	3	...	Str.	Str. Cum.
8.	SEAS.	8	bc	...	29.941	64.8	62.8	88	...	1	...	Str.	
10.	SEAS.	6	bc	...	29.953	64.3	61.8	85	...	2	...	Str.	Cum.
Midt.	SEAS.	8	bc	...	29.921	64.8	61.8	83	...	2	...	Cum.	
Totals.	...	74	bc	...	11291	63.1	32.1	61	...	18	...	Cum. & Str.	
Mean.	SEAS.	6	...	...	29.941	65.3	62.7	85	...	1	...		

## TUESDAY, 18TH.

2.	SEAS.	6	bc	...	29.871	65.8	62.8	83	...	0	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 74°, min. 62° 5.
4.	SEAS.	7	bc	...	29.881	65.8	62.8	83	...	0	...	...	
6.	SEAS.	4	bc	...	29.910	65.7	62.8	83	...	...	...	Cum.	Cum. Cum.
8.	SEAS.	5	bc	...	29.915	67.5	62.8	74	...	1	...	Cum.	
10.	SEAS.	6	bc	...	29.907	69.8	64.8	73	...	4	...	Cum.	Cum.
Noon.	SEAS.	7	bc	...	29.887	71.3	66.3	73	...	3	Cir.	Cum.	
2.	SEAS.	6	bcq	...	29.847	72.8	67.8	71	...	6	Cir str.	...	Cir str.
4.	SEAS.	7	bcq	...	29.827	72.8	67.8	71	...	7	Cir str.	...	
6.	SEAS.	7	bcq	...	29.825	68.8	64.8	78	...	7	Cir str.	...	Cir str.
8.	SEAS.	4	bc	...	29.864	66.8	64.8	88	...	7	Cir str.	...	
10.	SEAS.	3	b	...	29.876	67.8	65.8	88	...	0	...	...	...
Midt.	SEAS.	2	b	...	29.873	68.3	64.8	81	...	0	...	...	
Totals.	...	64	bcq	...	10483	103.3	58.1	112	...	35	...	Cir str.	Cum.
Mean.	SEAS.	5	...	...	29.874	68.6	64.8	79	...	3	...		

## WEDNESDAY 19TH

2.	sw'w.	3	b	...	29.863	63.8	60.8	82	...	0	...	...	At Simon's bay. Temperature by self-registering thermo- meter, max. 75° 5, min. 62° 5.
4.	w.	2	b	...	29.865	62.8	60.8	88	...	0	...	...	
6.	w's.	1	oe	...	29.916	63.3	61.3	88	...	10	Str.	Cum.	Cum.
8.	sw'w.	1	oe	...	29.969	62.8	59.8	82	...	10	Str.	Cum.	
10.	n. w.	1	oe	...	29.985	63.8	60.8	82	...	10	...	Cum.	Cir.
Noon.	SEAS.	1	bc	...	29.978	67.8	63.8	78	...	...	Cir.	...	
2.	sw'w.	1	bc	...	29.922	71.8	64.8	65	...	3	Cir.	Str. cum.	Str. cum.
4.	s. w.	1	...	...	29.946	73.8	65.8	62	...	...	Cir.	Str. cum.	
6.	s. w.	2	bc	...	29.935	67.8	62.8	73	...	6	...	Str. cum.	Cum.
8.	C'dm.	0	bc	...	29.975	65.8	62.8	83	...	5	...	Cum.	
10.	n'w.	1	bc	...	29.985	64.8	62.8	88	...	...	...	Cum.	Cum.
Midt.	w's.	1	bc	...	29.988	64.8	62.8	88	...	...	...	Cum.	
Totals.	...	15	bc	...	11297	73.1	29.1	959	...	44	...	Cir str.	Cum. & Str.
Mean.	Variable.	1	...	...	29.941	66.1	62.4	80	...	6	...		

## THURSDAY, 20th NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to Sea Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Fads. 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.b.s.	1	oc	...	29.995	64.8	61.8	83	...	10	...	Cum.	At Simon's bay. Temperature by self-registering thermometer, max. 76°, min. 62° 5.
4.	s.w.e.	1	ocp	...	29.997	62.3	60.8	91	...	10	...	Cum.	
6.	s.w.e.	1	od	...	30.044	62.8	61.3	91	...	10	...	Nimb.	
8.	Calm.	0	od	...	30.046	65.8	62.8	83	...	10	...	Str.	
10.	Calm.	0	od	...	30.051	68.8	66.3	85	...	10	...	Str.	
Noon.	e.b.s.	3	bem	...	30.063	70.8	67.8	83	...	4	...	Cum.	
2.	s.e.	3	bc	...	30.023	71.8	66.8	74	...	...	...	Cum.	
4.	s.w.e.	5	bc	...	29.989	74.8	69.8	74	...	...	...	Cum.	
6.	s.e.	6	bey	...	30.007	68.8	65.8	85	...	...	...	Cum.	
8.	s.e.	6	bc	...	30.035	65.8	63.8	88	...	...	...	Cum.	
10.	s.w.e.	4	b	...	30.051	66.8	63.8	83	...	0	...	...	
Midt.	e.b.s.	1	b	...	30.051	66.8	62.8	78	...	0	...	...	
Totals.	...	31	bep	...	352	90.1	53.6	996	...	54	...	Cum str. & Nimb.	
Mean.	Variable.	3		...	30.029	67.5	64.5	89	...	7	...	...	

## FRIDAY, 21st.

2.	Calm.	0	b	...	30.021	66.8	64.8	88	...	0	...	...	At Simon's bay. Temperature by self-registering thermometer, max. 85°, min. 65°.
4.	Calm.	0	b	...	30.011	63.8	61.8	88	...	0	...	...	
6.	Calm.	0	be	...	30.015	65.3	62.8	85	...	3	Cir str.	...	
8.	Calm.	0	be	...	30.030	72.8	68.8	79	...	2	Str.	...	
10.	e.b.s.	1	be	...	30.035	72.8	68.8	79	...	8	Cir str.	...	
Noon.	Calm.	0	...	...	30.002	73.8	68.8	74	...	...	...	...	
2.	Calm.	0	be	...	29.965	74.8	69.8	74	...	7	Cir str.	...	
4.	s.e.	1	be	...	29.937	78.8	72.8	71	...	6	Cir str.	...	
6.	e.b.s.	1	be	...	29.937	75.8	70.8	75	...	...	...	...	
8.	Calm.	0	b	...	29.965	67.8	65.8	88	...	0	...	...	
10.	s.w.bw.	2	be	...	29.973	64.8	62.8	88	...	2	Str.	...	
Midt.	s.w.bw.	1	be	...	29.938	64.8	62.8	88	...	4	Str.	Cum.	
Totals.	...	6	be	...	118.29	2.1	80.6	17	...	32	Cir str.	Cum.	
Mean.	Variable.	1		...	29.994	70.2	66.7	81	...	3	...	...	

## SATURDAY, 22d.

2.	Calm.	0	be	...	29.933	64.8	62.8	88	...	0	...	...	At Simon's bay. Temperature by self-registering thermometer, max. 75°, min. 61°.
4.	Calm.	0	be	...	29.912	63.8	61.8	88	...	4	Cir.	Str.	
6.	s.w.e.	1	be	...	29.911	65.8	63.8	88	...	...	...	Str.	
8.	s.w.e.	1	be	...	29.931	70.8	67.8	83	...	...	...	Str. cum	
10.	s.w.e.	1	be	...	29.941	71.3	68.0	82	...	...	...	Str. cum	
Noon.	e.b.s.	1	be	...	29.941	74.8	70.8	79	...	...	...	Cum.	
2.	s.w.bw.	2	be	...	29.937	72.8	68.8	74	...	...	...	Cum.	
4.	s.w.bw.	1	ocp	...	29.913	69.3	66.8	87	...	8	Cir.	Cum.	
6.	w.b.s.	2	cr	...	29.938	66.8	63.8	83	...	9	...	Cum.	
8.	s.w.	3	cr	...	29.935	62.8	60.8	88	...	9	...	Cum.	
10.	s.w.b.	8	ocp	...	30.027	61.3	59.8	91	...	10	...	Cum.	
Midt.	s.e.s.	3	eq	...	30.051	62.8	59.3	80	...	8	...	Cum.	
Totals.	...	23	beyr	...	113.70	87.1	77.3	1009	...	54	Cir.	Str. & Cum.	
Mean.	Variable.	2		...	29.949	67.3	64.4	84	...	7	...	...	

SUNDAY, 23<sup>D</sup> NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea. 4 to 10.	Barometer reduced to 32° and Sea-Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity.	Surface of Sea.		Upper.	Lower.	
2.	SEAS.	5	bc	...	30.054	62.8	58.8	77	...	8	...	Cum.	At Simon's bay.
4.	SEAS.	3	bc	...	30.068	61.8	57.8	77	...	7	...	Cum.	
6.	SEAS.	12	bc	...	30.104	64.8	62.8	88	...	6	...	Cum.	
8.	SEAS.	1	bc	...	30.164	64.8	60.8	78	...	...	...	Cum.	
10.	SEAS.	2	bc	...	30.130	67.8	62.8	73	...	...	...	Cum.	
Noon.	SEAS.	3	bc	...	30.188	67.8	63.8	78	...	...	...	Cum.	
2.	SEAS.	3	bc	...	30.169	69.8	64.8	73	...	3	...	Cum.	
4.	SEAS.	4	bc	...	30.132	71.3	64.8	67	...	3	...	Cum.	
6.	SEAS.	3	bc	...	29.152	66.8	62.8	78	...	3	...	Cum.	
8.	SEAS.	4	bc	...	30.148	66.8	61.8	73	...	...	...	Cum.	
10.	SEAS.	3	bc	...	30.203	63.8	61.8	88	...	...	...	Cum.	
Midt.	SEAS.	4	bc	...	30.176	62.8	60.8	88	...	...	...	Cum.	
Totals.	...	37	bc	...	1688	71.1	23.6	938	...	30	...	Cum.	
Mean.	SEAS.	3		...	30.141	65.9	62.0	78	...	5			

MONDAY, 24<sup>TH</sup>.

2.	SEAS.	4	b	...	30.147	63.3	60.8	85	...	0	...	...	At Simon's bay. Temperature by self-registering thermometer. max. 75° 8.
4.	SEAS.	2	b	...	30.127	63.8	61.3	85	...	0	...	...	
6.	SEAS.	4	b	...	30.167	63.8	61.8	88	...	0	...	...	
8.	SEAS.	3	b	...	30.161	64.8	62.3	85	...	0	...	...	
10.	SEAS.	3	b	...	30.147	70.8	65.8	73	...	3	...	Str.	
Noon.	SEAS.	4	bc	...	30.116	71.8	66.8	74	63	3	...	Str.	
2.	SEAS.	5	bc	...	30.015	72.8	67.8	74	63.2	3	...	Str.	
4.	SEAS.	6	bc	...	29.985	73.8	67.8	70	63.4	3	...	Str.	
6.	SEAS.	5	bc	...	29.995	69.8	65.3	75	63.3	4	Cir.	Str.	
8.	SEAS.	6	b	...	30.015	66.8	62.8	78	...	0	...	...	
10.	SEAS.	4	b	...	30.015	66.8	62.8	78	...	0	...	...	
Midt.	SEAS.	3	b	...	29.973	68.8	64.3	75	...	0	...	...	
Totals.	...	49	bc	...	863	97.1	49.6	100	12.9	16	Cir.	Str.	
Mean.	SEAS.	4		...	30.072	68.1	64.1	78	63.2	1			

TUESDAY, 25<sup>TH</sup>.

2.	SEAS.	3	bc	...	29.913	68.8	62.8	68	...	...	...	Str.	At Simon's bay. Temperature by self-registering thermometer. max. 84°, min. 62° 5.
4.	SEAS.	2	bc	...	29.893	68.3	63.8	75	...	...	...	Str.	
6.	SEAS.	1	bc	...	29.873	71.3	64.8	67	...	2	...	Str.	
8.	SEAS.	2	bc	...	29.873	74.8	67.8	66	...	1	Cir.	Str.	
10.	SEAS.	1	bc	...	29.846	76.8	69.8	67	...	8	...	Str.	
Noon.	SWAS.	2	bc	...	29.837	76.8	68.8	63	64.8	...	...	Str.	
2.	W.S.	1	bc	...	29.816	81.8	72.8	60	...	7	Cir.	Str.	
4.	SEAS.	1	bc	...	29.852	74.8	69.8	74	63.5	7	Cir.	Str.	
6.	SWAS.	1	bc	...	29.831	71.8	66.8	74	63.5	...	Cir.	Str.	
8.	W.S.	2	oplt	...	29.865	67.8	64.8	83	...	10	...	Cum&Str.	Sheet lightning round the horizon.
10.	W.S.	3	oplt	...	29.873	64.8	62.8	88	...	8	...	Nimb.	
Midt.	Calm.	0	bc	...	29.991	64.8	62.8	88	...	6	...	Cum.	
Totals.	...	19	bc	...	16373	862.6	77.6	873	11.8	52	Cir.	Str. & Nimb.	
Mean.	Variable.	2		...	29.861	71.9	66.5	73	63.9	6			

## WEDNESDAY, 26TH NOVEMBER 1873.

Hour.	Wind.		Weather	State of Sea.	Barometer reduced to sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S by E.	1	bc	...	29.906	63.8	61.8	88	...	75	...	Cum.	At Simon's bay. Temperature by self-registering thermometer, max. 66°, min. 62° 5.
4.	NW by W.	2	bc	...	29.905	63.3	60.8	85	...	...	...	Cum.	
6.	N by E.	1	bcp	...	29.916	63.8	61.8	88	...	7	...	Cum.	
8.	S by E.	2	ocp	...	29.915	63.8	61.8	88	...	10	...	Cum str.	
10.	NW by W.	2	ocp	...	29.958	64.8	62.8	88	61.2	10	...	Cum str.	
Noon.	NW by W.	1	ocp	...	29.992	64.3	62.8	91	61.2	10	...	Cum str.	
2.	NW by W.	3	oc	...	29.877	65.8	63.8	88	61.0	10	...	Str.	
4.	NW by W.	3	ocd	...	29.878	64.8	62.8	88	56.0	10	...	Str.	
6.	NW by W.	3	ocd	...	29.876	64.3	62.8	91	54.0	10	...	Str.	
8.	NW by W.	3	ocd	...	29.965	63.8	61.8	88	...	10	...	Cum.	
10.	NW by W.	1	ocd	...	29.935	62.8	61.8	94	...	8	...	Cum.	
Midt.	NW by W.	2	ocp	...	29.929	62.3	61.8	97	...	10	...	Cum.	
Totals.	...	22	...	...	10992	47.6	26.6	1074	293.4	107	...	...	
Mean.	N. N. W.	2	ocp	...	29.916	63.9	62.2	89	58.7	9	Str.	Cum. & Cum str.	

## THURSDAY, 27TH.

2.	W by N.	1	ocp	...	29.927	62.3	61.8	97	...	8	...	Cum.	At Simon's bay.
4.	W by N.	2	ocd	...	29.911	61.8	60.8	94	...	8	...	Cum.	
6.	W by N.	3	ocd	...	29.949	62.8	61.8	94	...	8	...	Cum.	
8.	W. N. W.	2	ocd	...	29.939	63.8	61.8	88	...	10	...	Cum.	
10.	W. N. W.	1	ocd	...	29.953	65.8	63.8	88	52.0	10	...	Cum.	
Noon.	W. S. W.	2	bcp	...	29.953	66.8	63.8	83	52.0	...	...	Cum str.	
2.	W by N.	2	bc	...	29.945	67.3	62.8	76	52.4	5	Cir.	Cum str.	
4.	W by N.	3	bc	...	29.955	64.8	61.8	83	52.0	5	...	Cum str.	
6.	W by N.	1	bc	...	29.968	63.8	60.8	82	52.0	7	Cir.	Cum str.	
8.	NW by W.	2	bc	...	29.981	62.8	59.8	72	51.5	7	...	Cum str.	
10.	W. S. W.	2	ocp	...	30.014	61.8	57.8	77	...	10	...	Cum str.	
Midt.	S by W.	1	bc	...	30.043	60.8	57.8	82	51.0	...	Cir str.	...	
Totals.	...	21	...	...	11538	44.6	14.6	1026	12.9	78	...	...	
Mean.	W.	2	cd	...	29.961	63.7	61.2	85	51.8	8	Cir str.	Cum. & Cum str.	

## FRIDAY, 28TH.

2.	SW by W.	2	bc	...	30.044	58.8	52.8	66	...	...	...	Cum.	At Simon's bay. Temperature by self-registering thermometer, max. 71°, min. 59° 5.
4.	SW by W.	1	bc	...	30.043	58.3	54.8	79	51.0	...	...	Cum.	
6.	S by W.	1	bc	...	30.065	60.8	56.8	77	...	4	...	Cum.	
8.	S by W.	1	bc	...	30.122	62.8	57.8	72	51.0	2	Cir.	...	
10.	SW by W.	1	bc	...	30.157	65.8	60.8	73	51.0	4	Cir.	Str.	
Noon.	SW by W.	1	bc	...	30.107	65.8	59.8	68	52.5	5	Cir.	Str.	
2.	SW by W.	1	bc	...	30.119	63.8	60.8	82	53.0	5	Cir.	Cum.	
4.	S. W.	2	bc	...	30.101	69.8	67.8	88	...	8	...	Cum.	
6.	S by E.	1	bc	...	30.149	63.8	58.8	72	54.9	7	...	Cum.	
8.	S by E.	2	bc	...	30.171	61.8	57.3	75	56.0	10	...	Cum.	
10.	S by E.	1	bc	...	30.184	60.8	55.8	72	56.0	7	Cir.	Cum.	
Midt.	S by W.	1	bc	...	30.184	61.3	55.8	70	56.0	8	Cir.	Cum.	
Totals.	...	15	...	...	1476	33.6	99.1	894	31.4	60	...	...	
Mean.	S. S. W.	1	bc	...	30.123	62.8	58.3	74	53.5	6	Cir.	Str. cum.	

## SATURDAY, 29TH NOVEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32 and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Gulb.	Damp Gulb.				Upper.	Lower.	
2.	s.w.	1	bc	...	30.186	59.8	54.8	71	...	...	...	Cum.	At Simon's bay. Temperature by self-registering thermo- meter, max. 68° 8', min. 59° 5'.
4.	s.w.	1	bc	...	30.166	59.8	51.8	58	57.0	...	...	Cum.	
6.	s.e.	1	bc	...	30.189	59.8	54.8	71	57.0	...	...	Cum.	
8.	s.e.	1	bc	...	30.209	63.8	57.8	67	57.5	6	...	Cum.	
10.	s.e.	1	bc	...	30.211	65.8	60.8	73	57.2	7	...	Cum.	
Noon.	s.e.	2	bc	...	30.205	66.8	60.8	68	57.2	4	Cir.	Cum.	
2.	s.e.	2	bc	...	30.206	65.8	60.8	73	58.5	3	Cir.	Cum.	
4.	s.e.	2	bc	...	30.188	66.8	60.8	68	58.7	4	...	Cum str.	
6.	s.e.	3	bc	...	30.189	63.8	58.8	72	58.0	...	...	Cum str.	
8.	s.e.	2	bc	...	30.214	61.8	57.8	77	57.5	4	...	Cum.	
10.	s.e.	3	bc	...	30.188	61.8	58.8	82	...	6	...	Cum.	
Midd.	s.e.	5	bc	...	30.174	62.8	59.8	82	59.0	4	Str.	Cum.	
Totals.	...	24	bc	...	2325	38.6	97.6	862	77.6	45	...	Cum. & Cum str.	
Mean.	s.e.	2	...	...	30.194	63.2	58.1	72	57.8	5	...	...	

## SUNDAY, 30TH.

2.	s.e.	7	b	...	30.117	59.8	57.8	88	58.5	0	...	...	At Simon's bay.
4.	s.e.	6	bm	...	30.070	61.8	58.8	82	57.0	0	...	...	
6.	s.e.	5	bm	...	30.067	60.8	57.8	82	59.5	0	...	...	
8.	s.e.	5	bm	...	30.073	63.8	59.8	77	61.0	0	...	...	
10.	s.e.	5	bm	...	30.071	65.8	61.8	78	62.0	0	...	...	
Noon.	s.e.	6	bm	...	30.064	67.8	62.3	71	62.0	0	...	...	
2.	s.e.	5	bm	...	30.025	68.8	62.8	68	62.0	0	...	...	
4.	s.e.	7	bcm	...	30.001	67.8	62.8	73	62.0	2	...	Cum.	
6.	s.e.	7	bcm	...	30.008	63.8	60.8	82	61.5	1	Cir str.	...	
8.	s.e.	6	bcm	...	29.938	62.8	59.8	82	59.0	1	Cir.	...	
10.	s.e.	5	bc	...	29.979	62.8	58.8	77	59.0	4	...	Cum.	Light cir str. rising from w'n.
Midd.	s.e.	6	bc	...	29.947	61.8	57.8	77	59.0	1	Cir str.	...	
Totals.	...	68	bc	...	360	47.6	1.1	97	25	9	...	...	
Mean.	s.e.	6	bc	...	30.030	64.0	60.1	78	60.2	1	Cir str.	Cum.	

## MONDAY, 1ST DECEMBER 1873.

2.	s.e.	5	bc	...	29.892	61.8	57.8	77	59.5	8	...	Cum str.	At Simon's bay.
4.	s.e.	4	bc	...	29.857	61.8	57.8	77	60.0	6	Str.	Cum.	
6.	s.e.	1	bc	...	29.859	62.3	58.8	80	61.0	5	Cir.	Str.	
8.	s.e.	1	bc	...	29.777	64.8	61.8	83	61.5	...	...	Str.	
10.	s.e.	1	bc	...	29.841	67.8	62.8	73	62.0	...	...	Str.	
Noon.	s.e.	1	bc	...	29.871	67.8	62.8	73	62.0	...	...	Str.	
2.	s.e.	1	bc	...	29.833	67.8	62.8	73	62.0	...	...	Str.	
4.	s.e.	2	bc	...	29.801	70.8	64.8	69	62.0	2	...	Str.	
6.	s.e.	1	bc	...	29.781	69.3	62.8	71	62.5	2	...	Str.	
8.	s.e.	0	b	...	29.771	63.8	60.8	82	61.5	0	...	...	
10.	s.e.	0	b	...	29.773	62.3	59.8	85	61.5	0	...	...	
Midd.	s.e.	1	b	...	29.758	61.3	57.8	80	59.0	0	...	...	
Totals.	...	18	bc	...	9814	61.6	11.6	923	145	25	...	...	
Mean.	s.e.	1	bc	...	29.818	65.1	61.0	77	61.2	3	Cir str.	Str.	

## TUESDAY, 2d DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w <sup>b</sup> s.	1	be	...	29.732	59.8	58.8	94	59.0	3	Cir.	Str.	In False bay. Temperature by self-registering thermo- meter, max. 75°, min. 69° 5'. (?) Left Simon's bay, and proceeded for Table bay.
4.	w <sup>b</sup> s.	1	be	...	29.728	59.8	58.8	94	58.0	4	...	Str.	
6.	e <sup>b</sup> s <sup>1</sup> / <sub>2</sub> s.	1	be	...	29.703	61.8	58.8	82	58.0	4	...	Str.	
8.	xxw <sup>1</sup> / <sub>2</sub> w.	1	be	...	29.706	64.8	60.8	78	58.5	7	...	Str.	
10.	s <sup>b</sup> e <sup>1</sup> / <sub>2</sub> e.	4	be	...	29.651	66.8	62.8	78	61.5	4	Cir.	Str. cum.	
Noon.	xw <sup>b</sup> s.	5	be	...	29.654	64.3	59.8	75	56.5	5	Cir.	Cum.	
2.	xxw <sup>1</sup> / <sub>2</sub> w.	6	cpq	3	29.667	59.3	58.8	97	53.0	9	Cir str.	Str. cum.	
4.	xxw <sup>1</sup> / <sub>2</sub> w.	4	be	3	29.654	61.5	59.8	89	55.0	9	Cir.	Cir cum.	
6.	s <sup>b</sup> e <sup>1</sup> / <sub>2</sub> e.	5	be	3	29.648	59.8	59.5	99	57.0	9	Str.	Cum.	
8.	xw <sup>1</sup> / <sub>2</sub> s.	3	oer	...	29.674	58.8	58.8	94	56.4	10	...	Cum.	
10.	xw <sup>1</sup> / <sub>2</sub> s.	12	oer	4	29.672	55.8	54.8	93	54.0	10	...	Cum.	
Midt.	xxw <sup>1</sup> / <sub>2</sub> w.	4	beql	4	29.679	57.8	56.8	93	54.0	5	...	Cum.	
Totals.	...	37	be & oer	17	8168	10.3	108.3	1066	80.9	77	Cir str.	Str. & Cum.	
Mean.	x.x.w.	3		3	29.681	60.9	59.0	89	56.7	6			

## WEDNESDAY, 3d.

2.	w.x.w.	3	cpql	...	29.652	56.8	55.8	93	54.0	9	...	Cum str.	In Table bay. Temperature by self-registering thermo- meter, max. 64°, min. 56°.
4.	xw <sup>b</sup> w.	5	cpq	...	29.654	57.8	56.3	90	...	9	...	Cum str.	
6.	xw <sup>b</sup> w.	3	cpq	...	29.668	57.3	55.8	90	54.0	9	...	Cum str.	
8.	xw <sup>b</sup> w.	5	cpq	...	29.696	56.8	56.8	100	54.0	8	...	Cum.	
10.	xw <sup>b</sup> w.	4	cpq	...	29.748	60.3	59.8	97	54.2	10	...	Cum.	
Noon.	w.x.w.	5	cpq	...	29.776	60.8	59.8	94	55.2	10	...	Cum.	
2.	w <sup>b</sup> s.	4	oer	...	29.843	60.8	59.8	94	55.0	10	...	Cum.	
4.	w <sup>b</sup> s.	3	oer	...	29.864	59.8	59.3	97	55.0	10	...	Cum.	
6.	w <sup>b</sup> s.	4	oer	...	29.894	58.8	58.8	100	55.0	10	...	Cum.	
8.	w <sup>b</sup> s.	3	oer	...	29.954	57.3	56.8	97	54.0	10	...	Cum.	
10.	w <sup>b</sup> s.	2	cpq	...	29.994	56.8	56.8	100	...	10	...	Cum.	
Midt.	w <sup>b</sup> s.	3	oer	...	29.994	56.8	56.3	97	54.8	10	...	Cum.	
Totals.	...	44	cpq & oer	...	9737	100.1	92.1	69	45.2	115	...	Cum. & Cum str.	
Mean.	w.x.w.	4		...	29.811	58.3	57.7	96	54.5	10			

## THURSDAY, 4th.

2.	w.	2	oer	...	30.007	56.8	54.8	87	...	8	...	Cum.	In Table bay. Temperature by self-registering thermo- meter, max. 67° 5', min. 56°.
4.	xw <sup>b</sup> w.	1	oer	...	30.006	55.8	54.8	93	55.2	9	...	Cum.	
6.	xw <sup>b</sup> w.	1	oe	...	30.032	56.8	55.8	93	...	10	...	Cum str.	
8.	w <sup>b</sup> s.	1	be	...	30.065	57.8	56.8	94	55.5	7	...	Cum str.	
10.	s.w.	2	be	...	30.084	62.8	57.8	72	...	6	Cir.	Cum.	
Noon.	sw <sup>b</sup> w.	2	be	...	30.094	62.8	58.8	77	55.5	4	Cir.	Cum.	
2.	sw <sup>b</sup> w.	4	be	...	30.089	60.8	60.8	100	...	6	Cir.	Cum.	
4.	w <sup>b</sup> s.	2	be	...	30.087	64.8	60.8	78	55.5	8	Cir.	Cum.	
6.	w <sup>b</sup> s.	12	be	...	30.112	60.8	57.8	82	...	7	...	Cum.	
8.	w <sup>b</sup> s.	12	er	...	30.159	59.8	55.8	76	55.5	10	...	Cum.	
10.	w <sup>b</sup> s.	1	be	...	30.187	58.8	56.3	85	...	8	...	Cum.	
Midt.	sw <sup>b</sup> w.	1	be	...	30.190	58.8	57.8	94	55.0	7	...	Cum.	
Totals.	...	21	berp	...	1112	116.6	88.1	1031	2.2	90	Cir.	Cum. & Cum str.	
Mean.	w <sup>b</sup> s.	2		...	30.093	59.7	57.3	86	55.4	7			

## FRIDAY, 5TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	sbg.	3	bc	...	30.183	56.8	55.8	93	...	8	Str.	Cum.	At Table bay. Temperature by self-registering thermo- meter, max. 62°, min. 57°.
4.	sbg.	2	bc	...	30.192	56.8	51.8	70	55.0	6	Str.	Cum.	
6.	sbg.	1	bc	...	30.220	56.8	53.8	81	...	6	Cr.&Cr.str.	...	
8.	sebs.	3	bc	...	30.250	59.8	55.8	76	54.9	9	...	Cum.	
10.	sebs.	1	bc	...	30.259	62.8	57.8	72	...	...	...	Cum.	
Noon.	sebs.	3	b	...	30.259	65.3	58.3	63	55.2	0	...	...	
2.	sbg.	1	bc	...	30.253	65.3	58.8	66	...	3	...	Cum.	
4.	sbg.	2	bc	...	30.287	65.3	59.8	70	57.1	4	...	Cum.	
6.	sbg.	5	bc	...	30.242	62.8	58.8	77	...	3	...	Cum.	
8.	ssebs.	5	b	...	30.246	59.8	57.8	88	56.0	0	...	...	
10.	ssebs.	5	b	...	30.257	59.3	56.8	85	...	0	...	...	
Midt.	ssebs.	5	b	...	30.257	58.8	56.8	88	56.0	0	...	...	
Totals.	...	36	bc	...	2905	729.6	82.1	929	34.2	39	Cir str.	Cum.	
Mean.	s.s.f.	3		...	30.242	60.8	56.8	77	55.7	4			

## SATURDAY, 6TH.

2.	ssebs.	5	bc	...	30.217	58.8	55.8	82	...	2	...	Cum.	At Table bay.
4.	ssebs.	6	bc	...	30.189	58.8	55.3	79	56.0	2	...	Cum.	
6.	ssebs.	4	bc	...	30.169	59.8	55.3	74	...	2	...	Str. cum.	
8.	swbs.	1	bc	...	30.142	64.3	58.3	67	56.5	3	Cir.	Str. cum.	
10.	wbs.	1	bc	...	30.130	69.3	60.8	58	57.5	2	Cir.	Str.	
Noon.	wbs.	2	bc	...	30.095	73.8	63.8	55	55.5	...	...	Str.	
2.	fbbs.	1	bc	...	30.067	74.8	66.8	62	55.5	...	Cir.	...	
4.	fbbs.	1	bc	...	30.038	72.8	65.8	66	55.0	...	Cir.	...	
6.	fbbs.	1	bc	...	30.002	71.8	66.3	71	55.0	4	Cir.	...	
8.	Calm.	0	bc	...	29.980	66.8	62.8	78	55.8	...	Cir.	...	
10.	swbs.	1	bc	...	29.941	65.3	61.8	81	54.0	...	Cir str.	...	
Midt.	swbs.	1	bc	...	29.926	63.0	60.3	84	54.8	...	Cir str.	...	
Totals.	...	24	bc	...	896	799.3	13.1	857	55.6	15	Cir str.	Str. cum.	
Mean.	Variable.	2		...	30.075	66.6	61.1	71	55.5	2			

## SUNDAY, 7TH.

2.	Calm.	0	bc	...	29.869	61.8	59.3	85	...	...	...	Cum str.	At Table bay. Temperature by self-registering thermo- meter, max. 78°, min. 61°5.
4.	wbs.	1	bc	...	29.828	61.8	56.8	72	53.2	...	...	Str.	
6.	Calm.	0	bc	...	29.843	59.8	58.8	94	53.0	3	Cir str.	...	
8.	sebs.	1	bc	...	29.809	65.8	62.8	83	53.0	...	Cir.	...	
10.	wbs.	1	bc	...	29.815	70.3	64.8	71	54.0	...	Cir.	...	
Noon.	sebs.	2	b	...	29.809	74.0	63.3	53	55.5	0	...	...	
2.	sebs.	2	b	...	29.823	73.8	64.8	58	54.5	0	...	...	
4.	sebs.	1	bc	...	29.846	73.8	66.8	66	53.5	2	Str.	...	
6.	sebs.	5	b	...	29.858	67.8	64.8	83	53.5	0	...	...	
8.	sebs.	7	b	...	29.912	64.8	63.8	91	53.5	0	...	...	
10.	sebs.	5	bcq	...	29.933	64.3	63.3	94	55.0	4	Cir.	Str. cum.	
Midt.	sebs.	7	bcq	...	29.952	63.3	62.3	94	55.0	3	Cir.	Str.	
Totals.	...	32	bcq	...	10297	801.3	31.6	947	43.7	12	Cir str.	Str. cum.	
Mean.	sbg.	3		...	29.858	66.8	62.6	79	53.6	2			

## MONDAY, 8TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E. 1/8.	7	bcq	...	29.946	62.8	60.8	88	...	3	Cir.	...	At Table bay.
4.	S.E. 1/8.	3	bq	...	29.939	61.8	60.8	94	54.0	0	...	...	
6.	S.S.E. 1/2.	7	bcq	...	30.004	63.8	61.8	88	...	1	...	Cum.	
8.	S.S.E. 1/2.	5	bcq	...	30.001	64.8	62.8	88	51.5	1	...	Str.	
10.	S.S.E. 1/2.	6	bcq	...	30.030	67.8	60.8	64	...	1	...	Str.	
Noon.	S.E. 1/2.	4	bcq	...	30.027	70.3	64.5	70	50.5	1	...	Str.	
2.	S.S.E. 1/2.	5	bq	...	30.014	70.8	66.8	78	...	0	...	...	
4.	S.E. 1/2.	4	bc	...	29.993	72.3	70.8	91	52.0	4	...	Cum.	
6.	S.E. 1/2.	5	bc	...	29.995	67.8	67.8	100	...	3	...	Cum.	
8.	S.E. 1/2.	4	b	...	...	64.8	64.8	100	49.0	0	...	...	
10.	S.E. 1/8.	5	b	...	30.006	64.3	63.8	97	...	0	...	...	
Midt.	S.E. 1/8.	6	b	...	29.986	63.8	63.8	100	50.5	0	...	...	
Totals.	...	61	bcq	...	10841	75.1	49.3	1058	7.5	13	Cir.	Str. cum.	
Mean.	S.S.E.	5		...	29.986	66.3	64.1	88	51.2	1			

## TUESDAY, 9TH.

2.	S.E. 1/8.	7	bc	...	29.941	64.8	64.8	100	...	4	Cir str.	...	At Table bay.
4.	S.E. 1/8.	5	bc	...	29.923	64.8	64.8	100	51.8	3	Cir.	...	
6.	W.N.W.	1	bc	...	29.919	64.8	64.8	100	...	3	Cir.	...	
8.	N.W. 1/2.	1	bc	...	29.959	64.3	63.8	97	50.5	2	Str.	...	
10.	N.W. 1/2.	1	b	...	29.958	67.8	66.8	94	...	0	...	...	
Noon.	N.W. 1/2.	1	b	...	29.953	75.3	74.8	97	51.5	0	...	...	
2.	N.W. 1/2.	1	b	...	29.917	75.3	65.8	57	...	0	...	...	
4.	N.E. 1/2.	1	b	...	29.889	76.3	67.3	59	50.0	0	...	...	
6.	Calm.	0	b	...	29.859	77.3	68.8	61	50.0	0	...	...	
8.	E. 1/2.	1	bc	...	29.865	73.8	65.8	62	...	1	Cir.	...	
10.	N.E. 1/2.	1	b	...	29.878	66.8	64.8	88	50.7	0	...	...	
Midt.	Calm.	0	b	...	29.871	65.8	64.8	94	50.0	0	...	...	
Totals.	...	20	bc	...	10932	117.1	77.1	1009	13.5	13	Cir str.	...	
Mean.	Variable.	2		...	29.911	69.8	66.4	84	51.9	1			

## WEDNESDAY, 10TH.

2.	Calm.	0	b	...	29.901	61.8	60.8	94	...	0	...	...	At Table bay. Temperature by self-registering thermo- meter, max. 75°, min. 62°.	
4.	Calm.	0	bc	...	29.878	61.8	59.8	88	53.0	1	...	Str.		
6.	Calm.	0	b	...	29.886	62.8	60.8	88	...	0	...	...		
8.	Calm.	0	b	...	29.909	66.8	64.8	88	51.2	0	...	...		
10.	N <sup>1</sup> / <sub>2</sub> W.	1	bc	...	29.929	65.8	61.8	78	...	1	...	Str.		
Noon.	W <sup>1</sup> / <sub>2</sub> N.	2	bc	...	29.930	68.8	63.8	73	51.2	1	...	Cum.		
2.	SSE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.933	71.8	67.8	79	...	5	Cir.	Cum.		
4.	SSE <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.895	68.8	65.8	83	50.5	4	Cir.	Str.		
6.	SE <sup>1</sup> / <sub>8</sub> S.	2	bc	...	29.896	69.5	66.8	84	...	4	...	Cum.		
8.	SE <sup>1</sup> / <sub>8</sub> S.	4	bc	...	29.905	66.8	65.8	94	50.5	3	...	Cum.		
10.	S <sup>1</sup> / <sub>2</sub> EE.	5	b	...	29.918	65.8	64.8	94	...	0	...	...		
Midt.	S <sup>1</sup> / <sub>2</sub> E.	3	b	...	29.932	65.8	64.8	94	50.7	0	...	...		
Totals.	...	20	bc	...	10912	76.3	47.6	1037	7.1	19	Cir.	Str. cum.		
Mean. Variable.	2	...		29.909	66.4	64.0	86	51.2	2					

## THURSDAY, 11TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Pump Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	s.w.b.w.	1	bc	...	29.918	65.3	64.8	97	...	3	...	Cum.	In Table bay.  Left Table bay, and proceeded for Simon's bay.
4.	Calm.	0	bc	...	29.921	63.8	63.8	100	53.0	2	...	Cum.	
6.	s.w.b.w.	1	bc	...	29.940	64.8	64.3	97	...	2	...	Cum.	
8.	s.w.b.w.	1	bc	...	29.946	66.8	62.8	78	...	3	...	Cum.	
10.	s.w.b.w.	1	bc	...	29.935	68.3	64.3	78	...	2	Cir.	...	
Noon.	e.b.s.	3	bcq	...	29.935	68.8	64.8	78	61.0	3	Cir.	Cum.	
2.	e.b.s.	3	bc	...	29.935	68.8	66.8	88	61.0	2	Cir.	Cum.	
4.	w.b.s.	1	bc	...	29.900	68.5	68.3	98	61.0	1	Cir.	...	
6.	Vble.	1	bc	...	29.925	66.5	66.5	100	59.5	2	Cir.	...	
8.	Vble.	1	bcq	...	29.903	64.8	61.8	83	...	3	...	Cir cum.	
10.	Calm.	0	bc	...	29.922	62.8	59.8	82	56.5	2	...	Cir cum.	
Midt.	s.s.w.	4	bc	...	29.917	63.8	59.8	77	55.2	2	Cir.	Cum.	
Totals.	...	17	bcq	...	11097	73.0	47.8	1056	57.2	27	Cir.	Cum.	
Mean.	Variable.	1		...	29.925	66.1	64.0	88	58.2	2			

## FRIDAY, 12TH.

2.	s.e.b.s.	2	bc	1	29.849	60.8	59.8	94	58.0	1	...	Str.	In False bay. Temperature by self-registering thermo- meter, max. 76°, min. 63°.
4.	s.e.b.s.	1	bc	2	29.859	61.8	60.8	94	57.5	1	...	Str.	
6.	s.e.b.s.	3	bc	2	29.879	63.8	62.8	94	59.0	2	Cir.	...	
8.	s.e.b.s.	3	bc	2	29.875	64.3	63.8	97	61.0	2	Cir.	...	
10.	s.e.b.s.	4	...	...	...	...	...	...	...	...	...	...	
Noon.	s.e.b.s.	4	...	...	29.866	70.8	67.8	83	...	...	Cir.	Cir cum.	
2.	s.w.b.w.	2	bc	...	29.853	73.8	66.8	66	...	4	Cir.	Cum str.	
4.	s.p.b.s.	2	bc	...	29.837	72.5	67.8	75	...	4	Cir.	Cum str.	
6.	s.w.b.w.	1	bc	...	29.853	69.8	66.8	83	...	4	Cir.	Cum str.	
8.	Calm.	0	bc	...	29.878	66.3	64.8	91	50.7	3	...	Cum str.	Anchored in Simon's bay.
10.	s.b.w.	1	bc	...	29.885	66.3	62.8	81	...	3	...	Cum str.	
Midt.	s.b.w.	1	bc	...	29.899	65.8	64.3	91	62.0	1	...	Cum.	
Totals.	...	24	bc	7	9533	76.0	48.3	949	348.2	25	Cir.	Cum str.	
Mean.	s.e.	2		2	29.867	66.9	64.4	86	58.0	2			

## SATURDAY, 13TH.

2.	Calm.	0	bc	...	29.878	64.8	62.8	88	...	2	...	Cum str.	In Simon's bay. Temperature by self-registering thermo- meter, max. 72° 5, min. 60° 0.
4.	w.b.s.	1	bc	...	29.855	63.8	60.8	82	61.0	4	Cir.	Cum str.	
6.	w.b.s.	1	c	...	29.883	64.8	62.8	88	...	10	Cir.	Cum str.	
8.	w.b.s.	1	c	...	29.910	67.8	64.8	83	61.5	10	...	Cum.	
10.	w.b.s.	2	c	...	29.935	69.0	66.8	86	...	10	...	Cum.	
Noon.	w.b.s.	3	bc	...	29.927	70.8	67.8	83	61.7	7	Cir.	Cum str.	
2.	w.b.s.	5	bcq	...	29.923	70.8	69.3	91	...	6	...	Cum str.	
4.	w.b.s.	3	bc	...	29.920	69.3	68.8	97	56.2	6	...	Cum str.	
6.	s.w.b.w.	2	bc	...	29.912	66.8	66.8	100	...	7	...	Cum str.	
8.	s.w.b.w.	3	cr	...	29.943	65.8	64.8	94	56.5	6	...	Cum str.	
10.	s.w.b.w.	2	cr	...	29.958	64.8	63.8	94	...	7	...	Cum.	
Midt.	s.w.b.w.	1	c	...	29.961	63.8	62.8	94	54.5	8	...	Cum.	
Totals.	...	24	bcqr	...	11005	82.3	62.1	1080	351.4	83	Cir.	Cum. & Cum str.	
Mean.	w.n.w.	2		...	29.917	66.9	65.2	90	58.6	7			

## SUNDAY, 14TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea 0 to 9.	Barometric reduced to 32° and Sea Level.	Thermometer.			Humidity Sat. at 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	Time.	Direction.	Force.			Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w.b.s.		3	ood	...	29.976	63.8	62.8	94	...	7	...	Cum.	In Simon's bay. Temperature by self-registering thermo- meter, max. 74°5, min. 61°0.
4.	sw.b.w.		12	bo	...	29.978	64.8	62.8	88	55.0	4	...	Cum.	
6.	sw.b.w.		1	bo	...	30.044	65.3	62.8	86	...	1	...	Cum.	
8.	sw's.		1	be	...	30.053	64.8	60.8	77	57.5	5	Cir.	Cum.	
10.	sw's.		12	be	...	30.072	67.8	62.8	73	...	4	Cir.	Cum.	
Nonon.	w.s.w.		12	be	...	30.066	70.8	68.8	88	58.5	4	Cir.	Str.	
2.	sw's.		1	be	...	30.062	72.8	68.8	79	...	6	Cir str.	...	
4.	sw's.		12	be	...	30.056	69.8	67.8	88	56.0	8	Cir str.	...	
6.	sw's.		1	be	...	30.041	67.0	61.8	72	...	6	Cir str.	...	
8.	sw's.		12	be	...	30.047	64.8	60.8	78	54.5	12	...	Cum.	
10.	sw's.		3	be	...	30.076	64.3	61.0	81	...	12	...	Cum.	
Mildt.	sw's.		4	beq	...	30.060	63.3	60.3	82	55.0	12	...	Cum.	
Totals.	...		24		...	531	79.3	41.3	987	36.5	54			
Mean.	s.s.w.		2	bed	...	30.044	66.6	63.4	82	56.1	4	Cir str.	Cum.	

## MONDAY, 15TH.

2.	se's.		4	beq	...	30.043	62.8	60.8	88	...	2	...	Cum.	In Simon's bay. Temperature by self-registering thermo- meter, max. 69°, min. 63°.
4.	se's.		7	beq	...	30.029	61.8	59.8	88	55.2	4	...	Cum str.	
6.	se's.		6	beq	...	30.033	61.8	58.8	82	...	6	Cir str.	Cum.	
8.	se's.		5	beq	...	30.032	63.8	59.8	77	55.2	7	...	...	
10.	se's.		7	...	...	30.041	64.3	61.3	82	...	...	...	...	
Nonon.	se's.		6	...	...	30.037	65.8	63.8	88	55.3	...	...	...	
2.	se's.		6	beq	...	29.992	66.8	60.8	68	...	0	...	...	
4.	se's.		6	beq	...	29.975	67.3	60.8	66	61.2	0	...	...	
6.	se's.		8	beq	...	29.993	65.3	60.8	76	...	0	...	...	
8.	se's.		8	beq	...	30.009	62.8	59.8	82	61.2	0	...	...	
10.	se's.		7	beq	...	30.006	62.8	59.8	82	...	0	...	...	
Mildt.	se's.		7	beq	...	29.921	62.3	59.8	85	61.2	1	...	Cum.	
Totals.	...		77		...	111	47.6	6.1	964	349.3	20			
Mean.	se's.		6	beq	...	30.009	64.0	60.5	80	58.2	2	Cir str.	Cum.	

## TUESDAY, 16TH.

2.	se's.		6	beq	...	29.951	62.8	61.5	93	...	2	Cir.	Cum.	In Simon's bay. Temperature by self-registering thermo- meter, max. 86°, min. 61°5.
4.	se's.		4	beq	...	29.908	63.3	62.3	94	61.2	0	...	...	
6.	se's.		5	b	...	29.930	64.8	59.8	73	...	0	...	...	
8.	se's.		3	b	...	29.928	68.8	61.8	64	61.5	0	...	...	
10.	se's.		2	b	...	29.915	71.8	64.8	65	...	0	...	...	
Nonon.	se's.		1	b	...	29.912	74.8	68.8	70	...	0	...	...	
2.	se's.		3	be	...	29.876	76.8	65.8	53	59.5	1	Cir str.	...	
4.	se's.		4	be	...	29.878	78.3	68.8	57	...	1	Cir str.	...	
6.	Calm.		0	b	...	29.818	76.8	68.8	63	...	0	...	...	
8.	Calm.		0	b	...	29.852	71.8	65.8	69	64.5	0	...	...	
10.	Calm.		0	b	...	29.887	68.8	65.8	83	...	0	...	...	
Mildt.	Calm.		0	b	...	29.893	66.8	63.8	83	...	0	...	...	
Totals.	...		28		...	1074.8	5.6	57.8	867	6.7	4			
Mean.	se's.		2	beq	...	29.896	70.5	64.8	72	61.7	0	Cir str.	...	

## WEDNESDAY, 17TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer (reduced to sea level and corrected for temperature).	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	29.864	67.3	64.3	83	...	0	...	...	At noon, lat. 34° 34' s. long. 18° 34' e. Temperature by self-registering thermometer, max. 72°, min. 61°. At 6.30 A.M., left Simon's bay for Prince Edward island, the Crozet group and Kerguelen.
4.	Calm.	0	b	...	29.834	66.8	63.8	83	64.5	0	...	...	
6.	Calm.	0	b	...	29.819	67.8	64.8	83	...	0	...	...	
8.	ebs's.	1	ben	...	29.934	66.8	63.8	83	61.5	1	Cir.	...	
10.	sw's.	2	bm	...	29.932	62.8	60.0	83	55.5	0	...	...	
Noon.	w.s.w.	3	bm	...	29.926	66.8	64.0	85	65.0	0	...	...	
2.	sw's.	1	ben	...	29.917	69.8	66.8	83	66.0	1	Str.	...	
4.	sw's.	1	ben	...	30.002	69.8	67.8	88	66.5	1	Str.	...	
6.	eb's.	1	ben	...	29.921	68.8	66.8	88	66.0	1	Str.	...	
8.	eb's.	2	ben	...	29.974	68.8	65.3	81	66.0	3	...	Str. cum.	
10.	...	...	ben	...	29.966	67.8	64.8	83	65.8	1	...	Str. cum.	
Midt.	w's.	2	ben	...	29.943	66.8	64.3	85	65.8	2	...	Str. cum.	
Totals.	...	13	ben	...	11032	90.1	56.5	48	42.6	10	Cir str.	Str. cum.	
Mean.	Variable.	1	...	...	29.919	67.5	64.7	84	63.5	1	...	...	

## THURSDAY, 18TH.

2.	w.s.w.	2	f	...	29.958	63.5	62.3	93	65.5	10	...	Str.	At noon, lat. 35° 20' s. long. 18° 40' e. Temperature by self-registering thermometer, max. 67°, min. 61° 8. Current, s. 21° w. 11'. Sp. gr. 1.02669.
4.	w.s.w.	1	ocm	...	29.930	63.3	62.3	94	66.0	10	...	Cum.	
6.	s.s.w.	1	om	...	29.972	63.8	62.8	94	65.5	10	...	Cum.	
8.	s.s.w.	2	oc	...	29.973	65.5	63.5	88	66.0	10	...	Cum.	
10.	n.w.	2	ben	...	29.974	65.8	63.5	87	66.2	7	Cir.	Cum.	
Noon.	sw'w.	3	ben	...	29.958	67.0	64.5	86	66.7	8	Str.	Cum.	
2.	w's.	3	ben	...	29.918	66.8	63.8	83	66.2	5	Cir.	Cum.	
4.	w's.	3	ben	...	29.893	66.8	63.8	83	66.0	6	Cir.	Cum.	
6.	sw'w.	3	be	...	29.924	66.5	63.5	83	66.7	8	...	Cum.	
8.	w.s.w.	3	be	...	29.948	66.3	64.3	88	66.0	7	Str.	Cum.	
10.	w.s.w.	4	bew	...	29.976	66.3	64.8	91	65.2	8	...	Cum str.	
Midt.	s.w.	3	bew	...	29.950	66.3	65.8	97	63.5	1	...	Cum.	
Totals.	...	30	...	...	11374	67.9	44.9	1067	69.5	90	Cir str.	Cum.	
Mean.	w.	3	ben	...	29.948	65.7	63.7	89	65.8	7	...	...	

## FRIDAY, 19TH.

2.	s.s.w.	3	ben	...	29.933	69.8	66.3	81	72.0	3	Cir.	Cum.	At noon, lat. 36° 48' s. long. 19° 24' e. Temperature by self-registering thermometer, max. 72° 8, min. 64° 8. Current, s. 16'. Sp. gr. 1.02663. 1.30 P.M., rain squall.
4.	sw's.	1	...	...	29.930	69.3	65.8	81	71.5	...	...	...	
6.	sw's.	3	be	...	29.981	68.3	62.5	69	72.5	8	Cir.	Cum.	
8.	sw's.	3	be	...	29.993	67.8	62.8	73	72.5	8	...	Cum.	
10.	sw'w.	2	be	...	29.989	70.8	62.8	61	72.5	5	Cir cum.	Str. cum.	
Noon.	sw'w.	2	be	...	29.985	71.8	63.5	60	73.0	4	Cir.	Cum.	
2.	s.w.	4	bep	...	29.979	69.3	63.8	71	72.7	8	...	Cum str.	
4.	s.w.	2	be	...	29.987	70.3	62.8	63	72.5	3	Cir.	Cum.	
6.	sw's.	1	be	...	29.957	69.8	62.8	65	72.5	5	Cir.	Cum.	
8.	sw'w.	1	be	...	30.021	67.8	62.8	73	72.5	6	Cir str.	Cum.	
10.	w.	2	be	...	29.975	67.5	62.3	72	72.0	6	...	Cum.	
Midt.	sw'w.	4	be	...	29.957	66.3	61.3	73	72.0	5	...	Cum.	
Totals.	...	28	...	...	11687	108.8	39.5	842	28.2	61	Cir str.	Cum.	
Mean.	sw'w.	2	bep	...	29.974	69.1	63.3	70	72.3	6	...	...	

## SATURDAY, 20TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea Level.	Thermometer.				Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	w.s.w.	4	bc	3	29.893	65.8	58.8	61	72.0	6	...	Cum.	At noon, lat. 38° 6' S, long. 19° 53' E. Temperature by self-registering thermo- meter, max. 69°, min. 64°.
3.	w.s.	3	bc	3	29.843	64.8	58.8	68	71.5	6	Cir str.	Cum.	
6.	w.	4	bc	2	29.839	64.8	58.8	68	71.7	9	Cir.	Cum.	
8.	w.	4	eq	3	29.823	65.8	59.8	68	71.0	10	...	Cum str.	Current, S. 74° W. 26°.
10.	w.	5	bcq	3	29.795	68.3	63.3	73	71.5	8	Cir.	Cum.	
Noon.	w.	6	bcq	4	29.755	67.8	62.8	73	72.0	7	Cir.	Cum.	Sp. gr. 1.02639.
2.	swbw.	5	c	4	29.745	67.8	63.3	76	68.5	8	...	Cum str.	
4.	swbw.	6	c	5	29.658	67.8	63.8	78	67.0	8	...	Cum str.	10 to 11 P.M., heavy rain squall.
6.	w.s.	6	oe	5	29.644	67.8	63.3	76	68.0	10	...	Cum.	
8.	w.s.	7	ocq	5	29.637	66.8	63.8	83	69.5	10	...	Cum.	
10.	w.s.	6	ocq	5	29.665	64.8	62.8	88	70.5	10	...	Cum.	
Midlt.	w.s.	5	bcq	5	29.655	67.3	62.8	76	72.0	7	...	Cum.	
Totals.	...	61	bcq	47	8952	79.6	22.1	891	5.2	99	Cir str.	Cum. & Cum str.	
Mean.	w.s.	5		4	29.746	66.6	61.8	74	70.4	8			

## SUNDAY, 21st.

1.	w.s.w.	6	bcq	5	29.609	65.8	63.0	84	72.0	6	...	Cum.	At noon, lat. 40° 22' S, long. 23° 55' E. Temperature by self-registering thermo- meter, max. 65°, min. 61°.
2.	swbw.	6	bcq	5	29.609	65.8	62.3	81	72.0	7	...	Cum.	
3.	swbw.	7	cq	5	29.590	64.3	62.8	91	65.0	6	...	Cum.	
4.	swbw.	6	bcq	5	29.575	62.8	61.5	92	61.8	5	...	Cum.	Current, S. 65° E. 36°.
5.	swbw.	5	bc	...	29.529	64.3	60.8	80	61.0	8	...	Str.	
6.	swbw.	4	bc	5	29.507	64.8	60.8	78	61.0	7	...	Cum str.	7 A.M., observed several patches of dark reddish coloured water.
7.	swbw.	5	od	5	29.501	64.8	59.8	73	61.5	10	...	Str.	
8.	N.W.	6	oe	5	29.461	64.8	61.5	82	61.0	10	...	Str.	Birds seen during the day were alba- tross, tern, stormy petrel.
9.	N.W.	6	ocq	...	29.425	...	...	...	61.0	10	...	...	
10.	N.W.	5	...	...	29.383	64.8	60.8	78	60.7	...	...	Str. cum.	
11.	...	...	...	...	29.377	...	...	...	60.7	...	...	...	Fish seen. Porpoises.
Noon.	swbw.	...	ocq	5	29.363	62.8	61.8	94	61.0	10	...	Cum str.	
1.	swbw.	6	ocq	5	29.325	62.8	62.3	97	61.0	10	...	Cum str.	Sp. gr. 1.02632.
2.	swbw.	6	cq	5	29.306	63.8	62.5	92	59.0	10	...	Str.	
3.	swbw.	6	cqpm	5	29.303	63.8	62.3	91	60.0	10	...	Cum str.	
4.	w.s.w.	6	bcqpm	6	29.290	64.3	62.3	88	60.0	6	...	Cum.	
5.	w.s.w.	8	cq	6	29.240	62.0	61.0	94	59.0	10	...	Cum.	
6.	w.s.	7	bcu	7	29.263	62.8	60.8	88	59.0	1	...	Cum.	
7.	swbw.	7	ocq	6	29.275	60.3	59.3	94	59.0	10	...	Cum & Str.	
8.	swbw.	6	cq	5	29.360	55.8	54.3	90	58.5	9	...	Cum & N.b.	
9.	s.s.w.	5	cq	5	29.416	54.8	52.8	87	58.0	9	...	Cum & N.b.	
10.	s.s.w.	6	oc	5	29.472	53.8	52.8	93	58.0	8	...	Str.	
11.	s.s.w.	5	bc	5	29.544	54.8	50.8	75	57.7	7	...	...	
Midlt.	s.s.w.	6	bcq	4	29.534	53.8	50.8	80	57.0	5	...	Str.	
Totals.	...	130	bcq	104	10257	37.8	207.1	1902	146.9	174	Str.	Str. cum. & Cum str.	
Mean.	w.s.	6		5	29.427	61.7	59.4	86	61.0	8			

MONDAY, 22<sup>d</sup> DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea 6 to 9	Barometer re- duced to 32° and Sea-Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	S.S.W.	5	bey	5	29.604	54.3	48.8	67	57.0	6	Str.	Cum.	At noon, lat. 42° 21' S., long. 27° 58' E. Temperature by self-registering thermo- meter, max. 52°, min. 47°. Current, N. 6° E. 9'.
2.	S.S.W.	6	bey	5	29.606	52.3	48.8	77	57.0	6	Str.	Cum.	
3.	swbs.	5	bey	5	29.618	52.3	49.3	80	57.5	7	...	Cum.	
4.	swbs.	7	bey	5	29.664	52.3	49.3	80	57.0	8	...	Cum.	
5.	swbs.	6	bey	6	29.676	50.3	48.3	86	56.5	6	...	Cir cum.	
6.	swbs.	7	bey	6	29.688	51.3	46.3	68	56.0	4	...	Cum.	
7.	swbs.	6	bey	6	29.697	50.3	46.8	77	54.5	...	...	Cum.	
8.	swbs.	7	bey	6	29.705	50.3	47.8	83	54.5	5	...	Cum.	
9.	swbs.	6	bey	5	29.739	49.3	46.8	83	52.5	9	...	Cum. & Nb.	
10.	swbs.	6	bey	5	29.727	50.8	47.3	77	53.5	7	...	Cum. & Nb.	
11.	swbs.	6	bey	5	29.747	51.3	47.8	77	54.2	8	Cir cum.	Cum.	
Noon.	swbs.	7	bc	5	29.737	51.3	47.8	77	54.0	7	...	Cum.	Birds seen during the day were numer- ous: tern, Cape hens, albatross, and stormy petrel. Sp. gr. 1-02590.
1.	swbs.	6	bc	5	29.755	50.5	47.3	79	53.5	6	...	Cum.	
2.	swbs.	7	bey	5	29.723	49.5	45.8	75	53.5	5	...	Cum. & Nb.	
3.	swbs.	6	bey	5	29.732	49.8	46.8	80	53.5	5	...	Cum.	
4.	swbs.	7	bey	5	29.753	47.8	45.3	82	53.5	5	...	Cum. & Nb.	
5.	swbs.	6	bey	5	29.768	48.8	45.8	79	53.5	6	...	Cum.	
6.	swbs.	7	bey	5	29.759	48.8	44.8	73	53.5	6	...	Cum.	
7.	swbs.	6	bey	5	29.769	48.8	45.3	76	53.0	5	...	Cum.	
8.	swbs.	7	ey	6	29.787	47.8	43.5	71	53.0	7	...	Cum.	
9.	swbs.	8	bey	5	29.800	47.3	43.3	73	49.0	9	...	Cum. & Nb.	
10.	swbs.	8	bey	5	29.774	46.3	42.8	76	48.5	6	...	Cum str.	
11.	swbs.	7	bc	5	29.771	45.8	42.8	79	48.0	5	...	Cum str.	
Mid.	swbs.	6	ocq	5	29.793	45.8	42.8	79	48.0	9	...	Cum. & Nb.	
Totals.	...	155	bey	125	17392	233.1	15.4	1854	84.7	147	Str. & Cir cum.	Cum. & Nimb.	
Mean.	swbs.	6		5	29.724	49.7	46.3	77	53.5	6			

TUESDAY, 23<sup>d</sup>.

1.	swbs.	5	bey		29.778	45.8	41.8	73	48.0	5	Cum & Nb.	At noon, lat. 44° 41' s, long. 31° 28' E.
2.	swbs.	7	bey		29.766	44.8	42.8	85	47.0	6	Cum & Nb.	Temperature by self-registering thermo-
3.	swbs.	5	bey		29.768	43.3	41.8	88	46.7	7	Cum & Nb.	meter, max. 44° 8', min. 39° 0'.
4.	s.w.	6	er		29.782	43.3	39.8	75	45.7	10	Cum & Nb.	Current, N. 26° E. 27'.
5.	swbs.	5	bc	4	29.782	42.3	40.3	85	45.0	8	Cum & Nb.	4 A.M., heavy squalls with sleet.
6.	swbw.	7	bey	1	29.779	43.0	41.3	87	45.0	7	Cum str.	
7.	swbw.	7	bey	1	29.789	42.3	40.3	85	45.0	8	Cum & Nb.	
8.	swbw.	4	bey	4	29.801	42.8	39.8	78	45.5	8	Cum & Nb.	
9.	swbw.	6	ocq	1	29.784	43.3	40.3	78	45.5	9	Cum str.	
10.	swbw.	4	bey	1	29.790	41.8	39.8	86	46.0	7	Cum & Nb.	
11.	swbw.	5	bey	1	29.793	41.8	39.8	85	46.0	6	Cum str.	Birds seen during the day were albatross,
Noon.	swbw.	5	bey	4	29.811	40.3	39.8	96	46.0	5	Cum.	stormy petrel, and tern.
1.	swbs.	7	bey	1	29.793	41.8	39.8	85	44.0	6	Cum & Nb.	Sp. gr. 1-02596.
2.	swbs.	6	bc	1	29.777	42.5	38.8	73	44.0	5	Cum.	
3.	swbs.	6	bc	1	29.781	43.8	40.3	74	44.0	6	Cum.	
4.	s.w.	5	bc	1	29.780	43.8	40.3	71	44.5	4	Cum.	
5.	swbw.	5	bc	3	29.768	43.8	40.3	74	44.0	5	Cum.	
6.	swbw.	4	bc	3	29.767	43.5	39.8	73	43.0	5	Cum.	
7.	w.s.w.	3	bc	3	29.751	42.8	40.8	84	43.0	6	Cir str.	
8.	w.	2	bc	3	29.743	42.8	40.8	84	43.0	5	Cir str.	
9.	swbw.	3	c	4	29.702	42.8	41.8	92	43.0	6	...	
10.	swbw.	5	cp	1	29.672	44.3	42.8	89	43.0	6	Cum.	
11.	wbs.	7	cp	3	29.668	40.0	39.8	98	43.0	8	Cum & Nb.	
Midn.	wbs.	3	cp	1	29.612	41.8	41.5	98	43.0	6	Cum.	
Totals.	...	122	bey	75	18237	68.5	14.6	1939	112.9	151	Cir str.	Cum. & Nimb.
Mean.	w.s.w.	5		1	29.760	42.9	40.6	83	44.7	6		

WEDNESDAY, 21<sup>ST</sup> DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to Sea-level.	Thermometer.			Humidity.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
1.	w.b.s.	5	bc	3	29.636	42.8	41.8	92	43.5	...	...	Str.		At noon, lat. 45° 57' s. long. 34° 39' E. Temperature by self-registering thermometer, max. 47°, min. 39° 2. Current, S. 45° E. 13'.
2.	w.b.s.	6	eq	3	29.623	41.3	40.3	92	43.5	9	...	Cum str.		
3.	w.b.s.	4	bcq	3	29.611	41.3	40.3	92	43.0	7	...	Cum.		
4.	w.b.s.	4	bc	2	29.607	40.3	39.3	92	43.0	4	Cir cum.	Str.		
5.	w.s.w.	3	bc	3	29.608	41.3	40.8	96	43.0	4	...	Cum.		
6.	w.b.s.	4	bcp	3	29.611	40.8	39.8	92	43.0	6	...	Cum str.		The birds seen during the day were albatross, tern, penguin, Cape lens, and stormy petrel. Sp. gr. 1.02518.
7.	s.w.	3	bcp	3	29.612	42.8	39.3	75	43.0	5	...	Cum str.		
8.	w.b.s.	12	bc	2	29.619	41.8	39.8	85	43.0	4	...	Cum str.		
9.	w.b.s.	12	bc	...	...	...	...	...	...	...	...	...		
10.	w.b.s.	12	bc	2	29.600	43.8	41.3	80	43.0	6	Cir str.	Cum.		
11.	sw.b.w.	3	bc	2	29.604	41.3	41.8	81	43.0	6	Cir cum.	Cum.		The birds seen during the day were albatross, tern, penguin, Cape lens, and stormy petrel. Sp. gr. 1.02518.
1.	w.b.s.	3	bc	2	29.593	44.3	42.8	88	43.0	7	Cir cum.	Cum.		
2.	w.b.s.	4	bc	2	29.590	45.8	43.0	80	43.0	4	Cir.	Cum.		
3.	sw.b.w.	3	bc	2	29.584	43.8	41.8	84	43.0	7	...	Cum str.		
4.	sw.b.w.	3	c	2	29.596	43.5	41.0	82	43.0	8	...	Cum str.		
5.	s.	12	oe	2	29.477	43.8	41.8	81	42.7	10	...	Cum str.		The birds seen during the day were albatross, tern, penguin, Cape lens, and stormy petrel. Sp. gr. 1.02518.
6.	S.S.E.	4	or	2	29.455	43.8	41.8	84	43.0	9	...	Str. & N.b.		
7.	S.S.E.	3	crq	2	29.427	42.8	42.3	96	42.7	10	...	Cum.		
8.	S.S.E.	5	crq	2	29.388	41.8	40.8	92	42.5	10	...	Cum.		
9.	S.E.E.	3	er	2	29.352	41.3	40.8	96	42.5	10	...	Cum.		
10.	S.E.E.	4	er	2	29.337	41.8	41.3	96	42.0	10	...	Cum.		The birds seen during the day were albatross, tern, penguin, Cape lens, and stormy petrel. Sp. gr. 1.02518.
11.	S.E.E.	5	oe	2	29.315	41.8	41.3	96	42.0	10	...	Cum.		
Midt.	S.E.E.	12	oe	2	29.304	42.3	41.8	96	42.0	10	...	Cum.		
Totals.	...	81	bcq	54	11893	62.3	27.3	20.1	65.4	160	...	Cir. & Str.	Cum. & Cum str.	
Mean.	S.W.	3		2	29.517	42.7	41.2	88	42.9	8	...			

THURSDAY, 25<sup>TH</sup>.

1.	E.b.s.	2	ed	2	29.278	42.8	41.8	92	42.0	9	...	Cum.		At noon, lat. 46° 28' s. long. 36° 43' E. Current, S. 25° W. 13'. Temperature by self-registering thermometer, max. 46°, min. 37°.
2.	E.b.s.	4	odq	2	29.305	40.8	40.8	100	42.0	10	...	Cum.		
3.	S.E.E.	5	eq	2	29.354	39.8	39.5	98	42.0	9	...	Cum.		
4.	S.b.s.	4	ed	2	29.376	39.0	38.8	98	41.8	8	...	Cum.		
5.	S.S.E.	6	odm	2	29.382	38.8	38.8	100	41.5	10	...	Str.		
6.	S.S.E.	6	odm	2	29.398	39.3	38.8	96	41.5	10	...	Str.		The birds seen during the day were albatross, tern, stormy petrel, and crested penguins. Sp. gr. 1.02510.
7.	s.	6	odm	3	29.436	38.5	37.8	94	41.2	10	...	Str.		
8.	S.	7	omq	3	29.478	38.5	37.8	94	41.0	10	...	Str.		
9.	sb.w.	5	omq	2	29.516	39.0	37.8	90	42.0	10	...	Str. cum.		
10.	sb.w.	6	om	2	29.541	38.8	37.8	84	41.5	10	...	Str. cum.		
11.	sb.w.	5	hem	2	29.546	38.8	37.8	84	41.5	9	...	Str. cum.		The birds seen during the day were albatross, tern, stormy petrel, and crested penguins. Sp. gr. 1.02510.
Noon.	s.	5	bc	2	29.588	38.8	37.8	77	42.0	9	...	Str. cum.		
1.	s.	5	bc	2	29.626	39.3	38.8	80	39.5	8	...	Cir.	Cum.	
2.	s.	5	bc	2	29.648	39.0	38.8	82	39.7	8	...	Cir.	Cum.	
3.	s.	5	bc	2	29.658	38.8	38.8	84	39.7	9	...	Cir.	Cum.	
4.	s.	4	c	2	29.677	37.8	36.3	87	39.7	10	...	Cir.	Cum.	The birds seen during the day were albatross, tern, stormy petrel, and crested penguins. Sp. gr. 1.02510.
5.	s.	5	c	2	29.677	38.8	37.8	92	39.8	10	...	Cum.		
6.	sb.w.	6	bcq	2	29.718	38.8	37.3	88	39.5	7	...	Cum str.		
7.	sw.b.s.	5	c	3	29.760	39.8	38.8	92	40.0	10	...	Cum.		
8.	w.b.s.	5	c	3	29.814	38.8	37.8	92	40.0	10	...	Cum.		The birds seen during the day were albatross, tern, stormy petrel, and crested penguins. Sp. gr. 1.02510.
9.	w.b.s.	4	ed	2	29.839	38.8	37.8	92	40.0	10	...	Cum str.		
10.	w.b.s.	3	bc	2	29.845	39.3	38.8	96	40.0	9	...	Cum str.		
11.	w.b.s.	3	bcq	2	29.893	38.8	38.3	96	...	9	...	Cum str.		
Midt.	sw.b.s.	4	eq	2	29.900	37.8	38.0	98	40.0	9	...	Cum.		
Totals.	...	116	bcq	52	14244	218.7	192.6	218.6	17.9	223	...	Cir.	Str. cum. & Cum str.	
Mean.	sb.w.	5		2	29.594	39.1	38.0	91	40.7	9	...			

## FRIDAY, 26TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	S. S. W.	3	bcq	2	29.920	38.3	37.3	91	...	9	...	Cum.	At noon, lat. 46° 48' S. long. 37° 50' E. Temperature by self-registering thermo- meter, max. 45° 5', min. 36° 2'.
2.	S. S. W.	5	ocqm	2	29.944	38.3	37.3	91	40.0	10	...	Cm. & Str.	
3.	swbs.	3	oc	2	29.964	38.8	36.8	84	...	10	...	Cm. & Str.	
4.	wbs.	4	ocq	2	30.014	38.3	36.8	88	40.0	10	...	Str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
5.	swbs.	3	cq	2	30.013	37.5	35.8	85	40.0	10	...	Cum str.	
6.	swbs.	5	c	2	30.060	38.5	37.3	89	40.2	8	...	...	
7.	S. S. W.	3	c	1	30.079	38.3	35.0	74	40.2	8	...	Cum str.	Birds in sight during the day were tern, albatross, and shag.
8.	swbs.	2	bc	1	30.118	38.8	33.3	60	40.2	6	...	Cum str.	
9.	swbs.	3	bc	1	30.150	40.0	37.3	79	41.0	6	...	Cum str.	
10.	NWbw.	1	bc	1	30.175	40.5	37.5	76	41.0	7	...	Cir str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
11.	N. W.	2	bc	1	30.196	42.8	39.3	75	41.0	6	...	Cum str.	
Noon.	wbs.	5	bcq	1	30.216	42.8	40.3	81	41.0	5	...	Cum str.	
1.	wbs.	5	bcq	...	30.228	41.8	38.8	78	...	5	...	Cum.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
2.	wbs.	5	bcq	...	30.235	44.8	40.0	67	41.0	5	...	Cum.	
3.	N. N. W.	5	bcq	...	30.220	43.8	39.8	71	...	4	...	Cum.	
4.	shw.	4	bcq	...	30.256	42.8	39.8	78	40.7	5	...	Cum.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
5.	shw.	4	bcq	...	30.292	41.8	39.8	85	...	6	...	Cum.	
6.	swbw.	6	bcq	...	30.272	41.8	39.3	82	41.0	4	...	Cir.	
7.	swbw.	5	bcq	...	30.289	41.8	39.8	85	41.0	5	...	Cir.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
8.	wbs.	4	bcq	...	30.324	41.3	39.8	89	41.0	3	...	Cir.	
9.	wbs.	2	bc	...	30.351	41.3	39.8	89	41.6	5	...	Cum.	
10.	wbs.	5	bc	...	30.346	41.3	39.8	89	40.5	5	...	Cum.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
11.	wbs.	4	bc	...	30.341	41.8	40.8	92	40.5	2	...	Cir str.	
Midt.	N. W.	4	bc	2	30.381	41.8	40.8	92	40.5	5	...	Cir str.	
Totals.	...	88	bcq	20	4387	19.0	42.3	1970	11.8	149	...	...	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
Mean.	wbs.	4	bcq	2	30.183	40.8	38.4	82	40.6	6	...	Cir str.	

## SATURDAY, 27TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	wbs.	3	bc	2	30.388	41.8	40.8	92	...	6	Str.	Cum.	At noon, lat. 46° 41' S. long. 38° 10' E. Temperature by self-registering thermo- meter, max. 47°, min. 41° 5'.
2.	wbs.	3	bem	2	30.378	41.8	40.3	88	40.7	8	...	Cum.	
3.	wbs.	3	bemid	2	30.378	41.8	41.3	96	...	9	...	Cum.	
4.	wbs.	3	bem	2	30.364	41.8	41.3	96	40.0	7	...	Cm. & Nb.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
5.	NWbw.	4	bem	2	30.370	42.3	41.8	96	...	8	...	Cm. & Nb.	
6.	N. N. W.	3	cf	2	30.385	42.8	41.8	92	41.0	10	...	Cum.	
7.	NWbw.	4	cf	2	30.408	42.8	42.0	94	...	10	...	Cum.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
8.	NWbw.	3	ocm	2	30.423	42.3	42.3	100	41.0	10	...	Str. cum.	
9.	wbs.	4	bem	2	30.417	41.5	43.5	92	41.0	8	...	Cir.	
10.	wbs.	5	bem	2	30.412	45.0	43.8	90	41.0	8	...	Cir.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
11.	NWbw.	3	cm	2	30.433	44.3	43.0	90	41.5	9	...	Cum.	
Noon.	NWbn.	2	cm	2	30.461	44.3	42.8	89	41.5	9	...	Cum str.	
1.	N. W.	4	bem	1	30.435	44.8	43.3	88	41.5	9	...	Cir str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
2.	NWbn.	2	bem	1	30.451	45.8	44.2	89	41.7	8	...	Str.	
3.	N. N. W.	3	bem	1	30.453	44.8	42.3	82	41.5	9	...	Cir str.	
4.	N. N. W.	4	bem	1	30.421	45.3	43.3	85	41.5	8	...	Cir str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
5.	N. N. W.	4	bem	1	30.421	45.8	42.8	79	...	7	...	Cir.	
6.	NWbn.	3	bem	1	30.418	45.3	42.3	78	41.0	6	...	Str.	
7.	NWbn.	3	bem	1	30.422	44.0	42.8	90	...	8	...	Cm. & Str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
8.	NWbn.	2	bem	1	30.435	43.3	42.0	90	...	8	...	Circumstr.	
9.	NWbn.	3	bc	1	30.422	43.3	42.0	88	40.0	5	...	Circumstr.	
10.	NWbn.	3	bc	1	30.417	42.8	41.3	88	39.8	3	...	Cir str.	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
11.	NWbn.	2	bc	1	30.424	41.8	40.8	92	39.8	5	...	Cum.	
Midt.	NWbn.	3	c	1	30.433	41.8	40.8	92	39.5	8	...	Cum.	
Totals.	...	76	bem	36	9969	84.3	52.6	2156	14.0	186	...	...	Sounding and dredging in the vicinity of Marion and Prince Edward islands.
Mean.	NWbw.	3	bem	1	30.415	43.5	42.2	89	40.8	8	...	Cir cum., Str., & Cum.	

## SUNDAY, 28TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, ft to ft.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N.W.	3	be	1	30.412	41.8	40.8	92	40.0	6	...	Str.	At noon, lat. 46° 48' S. long. 46° 41' E. Temperature by self-registering thermo- meter, max. 49°, min. 41°. 1.45 A.M., sky clear overhead.
2.	N.W.	3	be	1	30.398	41.3	40.8	96	39.5	12	...	Str.	
3.	N.	3	be	1	30.371	41.0	40.5	96	39.0	1	Cir cum.	...	
4.	N.	3	be	1	30.364	41.0	40.5	96	39.0	1	Cir str.	...	Sea a greyish-blue colour.
5.	N.	3	be	1	30.367	41.3	39.8	89	...	3	Cir.	Cum.	
6.	N.	3	be	1	30.366	41.8	40.5	90	40.0	...	Cir.	...	
7.	N.	3	be	1	30.364	41.8	39.8	85	...	12	...	...	Birds seen during the day were alba- tross, stormy petrel, and prion.
8.	N.	3	be	1	30.358	43.3	40.8	81	41.0	7	...	...	
9.	N.	3	be	1	30.350	41.8	43.3	89	...	0	...	...	
10.	N.	4	be	1	30.343	45.5	44.3	91	41.0	7	Cir cum.	Str.	Sp. gr. 1.02519. Sea dark blue.
11.	N.E.	4	be	1	...	46.8	44.8	86	...	4	Cir cum.	Str.	
Noon.	N.E.	5	be	1	30.330	47.0	45.0	86	41.2	3	Cir.	Str.	
1.	N.E.	4	be	1	30.324	47.3	45.0	84	42.5	2	Cir.	Cum.	Passed some sea-weed.
2.	N.E.	5	be	1	30.319	47.8	45.8	86	43.0	2	Cir.	Str.	
3.	N.E.	4	be	1	30.300	47.8	45.8	86	43.6	1	Cir.	Str.	
4.	N.E.	5	be	1	30.283	47.8	46.0	88	43.0	2	Cir.	Str.	Midnight clouds from W.S.
5.	N.	4	be	1	30.277	48.3	45.8	83	43.0	2	Cir.	Str.	
6.	N.	5	be	1	30.277	47.8	44.8	79	43.0	1	Cir.	Str.	
7.	N.	4	be	1	30.282	45.8	42.8	79	...	2	Cir.	Str.	
8.	N.	5	be	1	30.275	44.8	42.8	85	40.7	2	Cir.	Str.	
9.	N.	4	be	1	30.273	44.3	42.8	88	...	2	...	Str.	
10.	N.	5	be	1	30.261	44.3	42.8	88	40.5	4	...	Str.	
11.	N.	4	be	1	30.258	44.3	42.8	88	...	8	Cir cum.	Str.	
Midt.	N.	5	beq	1	30.249	44.8	43.8	92	41.0	7	Cir cum.	Str.	
Totals.	...	94	be	24	7.401	112.5	71.9	2103	20.4	85	Cir & Cir cum.	Str.	
Mean.	N.	4	1	1	30.322	44.7	43.0	88	41.2	4			

## MONDAY, 29TH.

Hour.	Wind.		Weather.	State of Sea, ft to ft.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N.W.	4	beq	2	30.268	44.8	43.5	91	41.5	4	Cir.	Cum.	At noon, lat. 46° 46' S. long. 45° 31' E. Temperature by self-registering thermo- meter, max. 50°, min. 43°.
2.	N.W.	5	beq	2	30.260	44.3	43.3	92	41.5	3	...	Cum str.	
3.	N.W.	4	beq	2	30.236	44.8	43.8	92	42.0	2	Cir str.	...	
4.	N.W.	5	beq	2	30.234	44.5	43.0	89	42.0	2	...	Cum str.	Current, S. 64° E. 9'. Sea a dark blue.
5.	N.W.	4	beq	3	30.231	44.5	44.0	96	42.0	7	...	Cum str.	
6.	N.W.	5	om	3	30.237	44.8	44.0	94	42.0	10	...	Str.	
7.	N.W.	4	beq	3	30.249	44.8	44.5	98	42.0	6	Cir cum.	Str.	Sp. gr. 1.02513. Birds seen during the day were Cape- pigeons, stormy petrels, albatross, penguins, and prion.
8.	N.W.	4	beq	3	30.258	46.3	45.5	95	42.0	4	Cir cum.	...	
9.	N.W.	4	beq	3	30.255	46.8	45.8	93	...	7	Cir cum.	...	
10.	N.W.	4	beq	3	30.262	46.8	45.0	88	43.5	7	Cir cum.	...	
11.	N.W.	4	beq	3	30.244	47.8	45.8	86	...	7	Cir str.	...	
Noon.	N.W.	4	beq	3	30.264	48.8	46.8	86	44.0	7	Cir str.	...	
1.	N.W.	4	beq	2	30.254	48.8	47.3	90	...	8	Cir cum.	...	
2.	N.W.	4	beq	2	30.252	48.8	47.3	90	43.0	8	...	Cir & Str.	
3.	N.W.	3	beq	2	30.246	49.5	47.8	88	...	8	Cir cum.	Str.	
4.	N.W.	4	beq	2	30.253	47.3	46.3	91	43.0	8	Cir cum.	Str.	
5.	N.W.	3	beq	2	30.230	46.5	45.8	95	...	8	Cir cum.	Str.	
6.	N.W.	4	be	2	30.251	46.8	45.5	91	42.5	6	...	Cum.	
7.	N.W.	4	be	2	30.282	45.5	44.8	95	...	8	...	Cum	
8.	N.W.	3	be	2	30.294	44.8	44.0	93	41.0	7	...	Cum.	
9.	N.W.	3	be	2	30.302	44.8	43.8	92	...	6	Cir str.	Cum	
10.	N.W.	3	be	...	30.316	44.8	43.8	92	41.0	7	Cir cum.	Str.	
11.	N.W.	3	be	...	30.330	43.8	43.3	96	...	6	Cir cum.	...	
Midt.	N.W.	3	be	...	30.317	43.8	42.8	92	40.8	5	Cir str.	...	
Totals.	...	92	beq	41	634.8	144.2	117.5	45	33.8	151	Cir cum. & Cir str.	Str. & Cum.	
Mean.	N.W.	1	2	2	30.264	46.0	44.9	92	42.1	6			

## TUESDAY, 30TH DECEMBER 1873.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	NW <sup>by</sup> S.	3	bcmw	1	30.300	43.8	42.8	92	...	4	...	Str.	At noon, lat. 46° 16' S. long. 48° 27' E. Temperature by self-registering thermo- meter, max. 50°, min. 43°. Current, S. 81° E. 13'.
2.	N. N. W.	4	bcmw	1	30.300	43.8	42.8	92	40.5	4	...	Str.	
3.	N. N. W.	3	bcmw	1	30.294	43.8	42.8	92	...	8	...	Cm. & Str.	
4.	N. N. W.	4	bcmw	1	30.298	43.8	42.8	92	40.5	8	...	Cm. & Str.	
5.	N. N. W.	3	cm	1	30.301	43.8	42.8	92	...	9	...	Cm. & Str.	
6.	N. N. W.	3	c	1	30.322	44.8	43.8	92	40.8	7	...	Cum.	
7.	N. N. W.	4	c	1	30.323	44.3	43.8	96	41.0	8	...	Cum str.	
8.	N. N. W.	3	c	1	30.320	44.8	44.0	94	41.0	8	...	Cum.	
9.	N.	3	cm	1	30.301	45.5	44.8	95	...	9	...	Cum.	
10.	N.	3	cm	1	30.295	46.5	45.5	93	41.0	9	...	Cum.	
11.	NW <sup>by</sup> S.	1	bcm	1	30.286	46.8	45.8	93	...	8	...	Cum str.	
Noon.	N. W.	4	bc	1	30.278	48.3	46.8	80	41.5	8	...	Cum str.	Sp. gr. 1.02516.
1.	N. W.	4	bc	1	30.277	48.8	46.8	86	...	6	Cir str.	...	Birds seen during the day were stormy petrel, Cape pigeons, penguins, prion, albatross, and Cape hens.
2.	N. W.	4	bc	1	30.275	48.8	46.8	86	41.2	8	...	Cum str.	
3.	N. W.	4	bc	1	30.258	46.8	44.8	86	...	9	Str.	Cum.	
4.	N. W.	4	bc	1	30.228	46.8	44.8	86	41.0	9	Str.	Cum.	
5.	N.	4	bc	1	30.220	45.8	44.3	90	...	8	...	Cm. & Str.	
6.	NW <sup>by</sup> E.	4	bc	1	30.220	45.8	43.8	86	41.0	8	Cir.	Cum.	
7.	NW <sup>by</sup> E.	4	bc	1	30.233	44.8	43.3	89	41.0	8	Cir cum.	Str.	
8.	NW <sup>by</sup> E.	3	c	1	30.229	44.3	43.3	92	41.0	9	...	Roll. cum.	
9.	N. N. E.	3	cw	1	30.232	44.5	43.8	94	...	9	...	Cum.	
10.	N. N. E.	3	cw	1	30.210	44.8	44.3	96	42.5	9	...	Cum.	
11.	N. N. E.	3	cw	1	30.195	45.0	44.0	92	...	9	...	Cum.	
Midt.	N. N. E.	3	cw	1	30.190	44.8	44.3	96	42.5	9	Cir str.	Cum.	
Totals.	...	62		24	6403	131.0	102.8	32	16.5	189			
Mean.	NW <sup>by</sup> E.	3	bcmw		1	30.267	45.5	44.3	91	41.2	8	Cir str.	Cum. & Str.

## WEDNESDAY, 31st.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N. N. E.	3	bc	...	30.169	44.8	43.8	92	...	8	Cir.	Cum.	At noon, lat. 46° 5' S. long. 49° 40' E. Temperature by self-registering thermo- meter, max. 50°, min. 43°. 2.
2.	N. N. E.	4	bc	...	30.173	44.3	43.8	96	42.0	7	Cir.	Cum.	
3.	N. N. E.	3	bc	...	30.131	44.8	43.8	92	42.5	7	Str.	Cum.	
4.	N. N. E.	4	bc	...	30.087	44.8	43.8	92	42.5	7	Str.	Cum.	
5.	N. N. E.	3	bcm	...	30.065	44.8	44.3	96	...	8	Str.	Cum.	
6.	N. N. E.	4	cf	...	30.057	44.8	44.8	100	42.2	10	...	Cum.	
7.	N. N. E.	4	cf	...	30.036	44.3	44.0	98	...	10	...	Str.	
8.	N. N. E.	3	cf	...	30.019	44.8	44.8	100	42.5	10	...	Str.	
9.	NW <sup>by</sup> E.	4	cf	...	29.981	45.5	45.5	100	42.5	10	...	Str.	
10.	NW <sup>by</sup> E.	3	cf	...	29.962	46.0	46.0	100	42.5	10	...	Str.	
11.	N.	4	cf	...	29.942	46.3	46.0	98	42.5	10	...	Str.	
Noon.	N.	3	cf	...	29.902	46.8	46.3	96	42.5	10	...	Str.	Sp. gr. 1.02503.
1.	NW <sup>by</sup> E.	4	cm	2	29.866	46.8	46.3	96	...	10	Cum str.	...	Birds seen during the day were alba- tross, stormy petrel, prion, penguins, and a few Cape pigeons.
2.	NW <sup>by</sup> E.	5	cm	2	29.848	46.8	46.5	98	42.5	10	...	Cum.	
3.	NW <sup>by</sup> E.	5	cm	2	29.841	46.8	46.3	96	...	10	Str.	Str.	
4.	NW <sup>by</sup> E.	5	or	2	29.830	46.8	46.3	96	42.5	10	...	Str.	
5.	NW <sup>by</sup> S.	6	or	2	29.777	48.8	48.8	100	...	10	...	Cum str.	
6.	NW <sup>by</sup> S.	5	or	2	29.761	48.8	48.8	100	42.5	10	...	Cum str.	
7.	NW <sup>by</sup> S.	5	ocpm	2	29.735	47.8	47.8	100	...	10	...	Cum str.	
8.	NW <sup>by</sup> S.	5	et	2	29.709	46.8	46.8	100	43.0	10	...	Str.	
9.	NW <sup>by</sup> S.	3	cf	2	29.742	45.8	45.8	100	42.0	10	...	Str.	
10.	NW <sup>by</sup> S.	4	cf	2	29.742	45.0	45.0	100	42.0	10	...	Str.	
11.	N. W.	3	om	2	29.738	45.3	45.3	100	42.0	10	...	Cum.	
Midt.	NW <sup>by</sup> S.	2	om	2	29.719	45.3	45.3	100	42.0	10	...	Cum.	
Totals.	...	90		24	21852	142.8	135.9	186	49.2	227			
Mean.	N.	4	cfm		2	29.909	45.9	45.7	98	42.4	9	Cir str.	Cum. & Str.

## THURSDAY, 1ST JANUARY 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 0° and Sea-Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea-surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	W.N.W.	1	olf	2	29.705	43.3	43.3	100	...	10	...	Str.	At noon, lat. 46° 45' S. long. 50° 10' E. Temperature by self-registering thermo- meter, max. 49°, min. 39°. Current, S. 29 E. 16'.
2.	W.N.W.	3	olf	2	29.712	40.8	40.8	100	41.5	9	...	Str.	
3.	W.N.W.	2	ol	3	29.726	40.8	40.8	100	...	9	...	Str.	
4.	swbyw.	4	olf	3	29.733	39.3	39.3	100	41.0	10	...	Str.	
5.	...	...	olf	3	29.776	41.3	39.8	88	...	19	...	Str.	
6.	wbs.	3	bm	1	29.773	40.8	40.5	98	40.8	0	...	...	
7.	wbs.	3	bf	2	29.771	41.3	41.3	100	...	0	...	...	
8.	wbs.	3	om	2	29.783	40.5	40.3	98	40.8	10	...	Str.	
9.	wbs.	2	of	1	29.797	41.3	41.3	100	...	10	...	Str.	
10.	swbyw.	1	of	1	29.805	41.3	41.8	100	42.2	10	...	Str.	
11.	swbyw.	2	of	1	29.795	41.5	42.0	100	...	10	...	Str.	
Noon.	S.E.	1	bef	1	29.785	41.8	40.8	92	42.5	12	Cir.	Str.	Birds seen during the day were albatross, carrion gull, penguin, prion, stormy petrel.
1.	S.E.	1	bf	1	29.796	43.3	41.5	85	...	5	Cir.	Str.	
2.	S.E.	1	bf	1	29.758	42.0	41.0	92	42.8	7	Cir.	Str.	
3.	E.N.	2	bef	1	29.728	42.0	40.8	90	...	5	Cir.	Str.	
4.	E.N.	4	...	...	29.678	41.0	40.8	98	42.0	...	...	...	
5.	E.N.E.	5	ofd	2	29.628	41.5	41.3	98	...	10	...	Nimb.	
6.	N.E.	4	or	...	29.553	41.8	41.3	96	...	10	...	Nimb.	
7.	N.E.	4	orm	...	29.510	42.3	42.0	98	42.2	10	...	Nimb.	
8.	N.E.	3	orm	...	29.461	42.8	42.8	100	42.2	10	...	Nimb.	
9.	E.	3	orm	...	29.377	42.3	42.3	100	...	10	...	Nimb.	
10.	Ebs.	3	orm	...	29.302	43.8	43.8	100	41.5	10	...	Nimb.	
11.	Ebs.	4	orm	...	29.288	44.8	44.8	100	41.2	10	...	Nimb.	
Midd.	E.S.E.	3	orm	...	29.199	43.8	43.8	100	41.2	10	...	Nimb.	
Totals.		62	omdf	27	15439	45.4	38.2	2334	21.9	187	Cir.	Str. & Nimb.	
Mean. Variable.		3		2	29.643	41.9	41.6	97	41.7	8			

## FRIDAY, 2d.

1.	S.E.	4	or	2	29.176	41.8	41.8	100	41.2	10	...	Cum.	At noon, lat. 46° 41' S. long. 51° 12' E. Temperature by self-registering thermo- meter, max. 44°, min. 40°. Current, S. 48 E. 17'.
2.	S.S.E.	5	op	2	29.188	41.8	41.8	100	41.0	10	...	Cum.	
3.	swbyw.	6	eqm	3	29.255	40.8	40.8	100	41.0	10	...	Cum.	
4.	S.W.	7	eqm	4	29.289	40.8	40.8	100	41.0	10	...	Cum.	
5.	swbyw.	7	eq	4	29.375	41.0	40.8	98	...	10	...	Str.	
6.	S.W.	8	eq	5	29.398	41.5	41.0	95	41.2	10	...	Str.	Birds seen during the day were albatross, stormy petrel, prion, Cape penguins, penguins, and Cape hens. Sp. gr. 192520. At 1 P.M., passed some sea-weed <i>Ulva vulva</i> (L.).
7.	S.W.	7	eq	4	29.481	...	...	...	...	9	...	Cum.	
8.	S.W.	6	eq	5	29.500	42.0	41.3	96	41.8	9	...	Str.	
9.	S.W.	6	eq	5	29.540	41.3	40.8	96	...	...	...	Cum.	
10.	S.W.	6	...	5	29.594	41.8	40.8	92	40.8	...	...	...	
11.	S.W.	5	...	5	29.621	41.8	41.0	94	...	...	...	...	
Noon.	S.W.	3	bc	4	29.650	42.5	41.8	94	40.2	4	Cir.	Str.	
1.	swbyw.	3	bm	3	29.692	43.5	42.8	94	...	4	Cir str.	Str.	
2.	wbs.	3	bm	3	29.709	43.8	42.8	92	41.0	3	Cir str.	Str.	
3.	w.	3	bm	3	29.702	43.0	42.3	94	...	4	...	Str. & Cum.	
4.	wbs.	3	cu	3	29.719	41.8	40.8	92	40.5	10	...	Cum.	
5.	wbs.	2	bm	2	29.731	41.5	40.8	94	...	9	...	Cum.	
6.	wbs.	3	bm	2	29.734	41.3	40.8	96	40.5	8	...	Cum.	
7.	Sbr.	2	bm	2	29.756	42.0	41.5	97	...	4	Cir str.	Cum.	Swell from S.W.
8.	Variable.	2	bm	4	29.756	42.8	41.8	92	40.5	4	Cir.	Cum.	
9.	...	...	bm	...	29.735	41.8	40.8	92	...	5	Cir str.	Str. & Cum.	
10.	S.S.W.	3	eqm	...	29.715	41.3	40.8	96	40.5	7	...	Cum.	
11.	S.S.W.	4	eqm	...	29.692	41.8	41.0	94	...	10	...	Cum.	
Midd.	S.S.W.	3	eqm	...	29.682	42.8	41.8	92	41.0	10	...	Cum.	
Totals.		101	eqm	55	13630	44.5	39.7	120	12.2	169	Cir str.	Str. & Cum.	
Mean. Variable.		4		3	29.579	41.9	41.3	95	40.9	8			

SATURDAY, 3D JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb	Damp Bulb				Upper.	Lower.	
1.	N.	3	cq	4	29.646	43.8	43.8	100	...	10	...	Cm.&Nb.	At noon, lat. 46° 47' s. long. 51° 37' E. Temperature by self-registering thermo- meter, max. 48°, min. 40° 5.
2.	N. N. W.	6	opr	4	29.578	48.8	47.3	90	41.0	10	...	Nimb.	
3.	N. N. W.	8	opr	4	29.518	46.3	45.8	97	...	10	...	Nimb.	
4.	N. N. W.	7	opr	4	29.470	44.8	44.8	100	41.0	10	...	Nimb.	
5.	N. N. W.	9	opr	4	29.503	44.0	43.8	98	41.0	10	...	Cum.	
6.	N. N. W.	5	opr	4	29.501	44.3	43.8	96	41.0	10	...	Cum.	
7.	N. N. W.	4	omf	3	29.492	43.8	43.8	100	41.5	10	...	Str. cum.	
8.	N. N. W.	3	omf	3	29.488	43.8	43.8	100	40.5	10	...	Str. cum.	
9.	N.W.b.w.	3	omf	...	...	44.8	44.5	98	...	10	...	Cum.	
10.	N. N. W.	3	omf	4	29.475	44.8	44.5	98	...	10	...	Str. cum.	
11.	N. N. W.	4	bcm	4	29.472	44.8	44.5	92	41.0	9	...	Cum.	
1.	N. N. W.	4	bc	...	29.475	44.3	43.3	92	41.0	7	...	Cum.	Birds seen during the day were albatross, Cape pigeon, stormy petrel, penguins, prion. Sp. gr. 1°02507.
2.	N. N. W.	4	bc	...	29.478	43.8	42.8	92	41.0	7	Cir cum.	Cum.	
3.	N. N. W.	4	cm	...	29.452	45.3	43.8	88	41.0	6	Cir cum.	Cum.	
4.	N. N. W.	4	bc	...	29.455	44.8	43.8	92	...	9	...	Cum.	
5.	N. N. W.	4	bcm	...	29.448	44.0	42.8	90	41.0	9	...	Cum.	
6.	N. N. W.	4	bcm	...	29.471	43.8	42.5	90	...	8	...	Cum.	
7.	N. N. W.	5	cm	...	29.485	43.8	41.8	84	40.8	9	...	Cum.	
8.	N. N. W.	6	bcm	...	29.491	43.3	41.8	88	40.5	5	Str.	Cum.	
9.	N. N. W.	7	bcm	...	29.509	43.3	41.3	84	40.2	7	Cir.	Cum.	
10.	N. N. W.	6	cq	4	29.520	42.8	40.3	81	...	10	...	Cum.	
11.	N. N. W.	7	cq	4	29.534	42.3	40.3	85	40.5	9	...	Cm.&Nb.	
Midt.	N.W.b.w.	7	bcq	4	29.551	41.8	40.3	88	...	8	...	Cm.&Nb.	Lower clouds from W.b.s. Sea increasing.
	N.W.b.w.	7	bcq	5	29.565	41.8	39.8	85	40.2	8	...	Cum.	
Totals.	...	123	...	59	11577	99.1	74.3	48	13.2	211	Cir cum.	Str. cum. & Str.	
Mean.	N.W.b.w.	5	cqrf	4	29.503	44.1	43.1	92	40.8	9	Cir cum. & Str.	Str. cum. & Nimb.	

SUNDAY, 4TH.

1.	N.W.b.w.	7	cq	...	29.555	41.8	39.8	85	40.3	9	Cir cum.	Cm.&Nb.	At noon, lat. 47° 8' s. long. 50° 22' E. Temperature by self-registering thermo- meter, max. 45°, min. 40°. Current, S. 15° E. 13°.
2.	N. N. W.	5	cq	...	29.557	41.8	40.3	88	40.8	7	Cir cum.	Cm.&Nb.	
3.	N.W.b.w.	8	bcq	...	29.574	41.3	39.8	88	41.8	7	Cir cum.	Cm.&Nb.	
4.	N. N. W.	5	bcq	6	29.586	40.8	39.8	92	41.8	6	...	Cum.	
5.	N.W.b.w.	6	cq	6	29.584	41.8	39.3	81	...	8	...	Str. cum.	
6.	N. N. W.	8	cq	6	29.602	41.3	38.8	81	41.8	9	...	Str. cum.	
7.	N. N. W.	6	cq	6	29.602	41.3	39.8	89	...	9	...	Cum str.	
8.	N. N. W.	8	cq	6	29.604	41.8	39.8	85	41.8	9	...	Cum str.	
9.	N. N. W.	6	cq	6	29.654	41.8	38.8	78	...	8	...	Cum str.	
10.	N.W.b.w.	8	bcq	6	29.619	41.8	38.8	78	42.5	6	Cir str.	Cm.&Nb.	
11.	N.W.b.w.	6	bcq	7	29.636	42.3	40.0	83	...	7	...	Cm.&Nb.	Birds seen during the day were alba- tross, stormy petrel, tern, Cape pigeons, and Cape hens. Sp. gr. 1°02194.
1.	N.W.b.w.	8	bcq	7	29.628	42.8	39.8	78	42.5	6	Cir.	Cm.&Nb.	
2.	N.W.b.w.	6	bcq	6	29.616	42.8	40.8	84	...	7	Cir cum.	Cum str.	
3.	N.W.b.w.	7	bcq	6	29.561	42.8	41.8	92	43.5	9	...	Cm.&Nb.	
4.	N.W.b.w.	6	bcq	6	29.592	43.8	41.8	84	...	9	...	Cm.&Nb.	
5.	N.W.b.w.	7	bcq	6	29.581	42.8	40.8	84	42.2	9	...	Cum.	
6.	N.W.b.w.	7	...	6	29.584	43.3	41.8	88	...	...	...	...	
7.	N.W.b.w.	6	bc	6	29.529	43.3	40.8	81	41.8	8	...	Cum.	
8.	N.W.b.w.	7	cq	6	29.552	42.8	41.8	92	...	9	...	Cum.	
9.	N.W.b.w.	6	cq	6	29.512	43.3	41.8	88	41.8	10	...	Cum.	
10.	N.W.b.w.	8	cq	6	29.513	43.3	41.8	88	...	10	...	Cum.	
11.	N.W.b.w.	7	cq	6	29.467	43.3	42.8	96	41.5	10	...	Cum.	7 P.M., passed some sea-weed.
Midt.	N.W.b.w.	8	cq	6	29.457	43.8	42.8	92	...	9	...	Cum.	
	N.W.b.w.	7	cq	6	29.435	43.8	42.0	86	41.5	8	Cir.	Cum.	
Totals.	...	163	...	128	13600	59.7	15.6	2061	25.6	189	Cir cum.	Str. cum. & Nimb.	
Mean.	N. N. W.	7	cq	6	29.567	42.5	40.6	86	41.8	8	Cir cum.	Str. cum. & Nimb.	

## MONDAY, 5TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Thermometer. Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
1.	w. s. w.	7	eq	7	29.426	43.3	41.8	88	...	8	...	Cum. & Nb.	...	At noon, lat. 47° 41' s. long. 61° 38' E. Temperature by self-registering thermometer, max. 43° 5, min. 39° 0. Current, s. 38° E. 14'. 2.15 A.M., hard squall from wbs with hail. Thermometer fell 3 in squall.
2.	w. s. w.	8	eq	7	29.431	42.8	41.8	92	41.5	9	...	Cum. & Nb.	...	
3.	w. s. w.	7	beq	7	29.401	40.8	40.0	94	...	8	...	Cum.	...	
4.	w. s. w.	6	beq	6	29.397	41.3	38.5	80	41.5	5	...	Cum.	...	
5.	w. s. w.	7	beq	7	29.398	41.8	39.3	81	...	5	...	Cum.	...	
6.	w. s.	8	beq	7	29.410	40.8	37.8	77	41.7	5	...	Cum. & Nb.	...	
7.	w.	6	beq	7	29.394	41.0	38.8	83	...	3	...	Cum. & Str.	...	
8.	w.	8	...	...	29.403	...	...	...	41.5	...	...	...	...	
9.	w.	6	beq	7	29.421	41.3	38.8	81	...	4	...	Cum.	...	
10.	w. s.	8	beq	7	29.419	41.8	39.5	83	41.0	5	...	Cum.	...	
11.	w.	6	beq	7	29.436	42.3	39.8	82	...	4	...	Cum. str.	...	
Noon.	w. s.	7	beq	6	29.440	42.3	39.8	82	40.5	5	...	Cum.	...	Birds seen during the day were albatross, Cape pigeon, stormy petrel, Sp. gr. 102510.
1.	w. s.	6	be	...	29.453	42.8	39.8	78	...	4	...	Cir.	Cum.	
2.	w. s.	6	be	...	29.461	42.8	39.3	75	41.0	3	...	Cir.	Cum.	
3.	w. s.	6	be	...	29.461	41.8	39.8	85	...	6	...	Cir.	Cum.	
4.	w. s.	6	be	...	29.420	41.8	39.8	85	39.5	7	...	Cir.	Cum.	
5.	w. s.	8	beq	...	29.428	41.3	39.8	88	...	6	...	Cir.	Cum.	
6.	w. s.	6	be	6	29.434	42.8	40.3	81	40.0	4	...	Cum.	...	
7.	...	...	beq	...	29.433	39.3	37.8	88	...	6	...	Cum. & Nb.	...	
8.	...	...	beq	...	29.408	39.3	36.8	80	40.0	7	...	Cir. cum.	Cum. & Nb.	
9.	w. s.	6	o	...	29.403	39.8	38.3	88	...	10	...	Cir. & Str.	...	10 P.M., heavy hail squall, during which wind shifted to s. s. e.
10.	w. s.	7	beq	...	29.409	38.3	36.8	88	40.0	9	...	Cir. & Str.	...	
11.	w. s.	6	beq	...	29.407	39.8	37.8	84	...	7	...	Cum.	...	
Midt.	w. s.	7	eq	...	29.413	39.8	37.8	84	39.7	9	...	Cir. & Str.	...	
Totals.	...	148	beq	81	10106	29.1	210.0	87	7.9	139	...	Cir.	Cum. & Nimb.	
Mean.	w. s.	7		7	29.421	41.3	39.1	84	40.7	6	...			

## TUESDAY, 6TH.

1.	w. s.	6	eqs	6	29.409	38.8	36.8	84	...	8	...	Cum. & Nb.	...	At noon, lat. 48° 32' s. long. 66° 50' E. Temperature by self-registering thermometer, max. 41°, min. 36°. Current, s. 44° E. 19'. Squalls with rain and sleet. 8 A.M., a few porpoises seen.
2.	w. s.	8	eqs	6	29.405	38.8	36.8	84	38.5	8	...	Cum. & Nb.	...	
3.	w. s.	6	eq	6	29.393	38.3	36.8	87	...	8	...	Cum. & Nb.	...	
4.	w. s.	8	beq	6	29.387	37.8	36.5	89	38.5	7	...	Cir.	Cum. & Nb.	
5.	w. s.	6	beq	6	29.376	39.0	37.3	86	...	8	...	Cum. & Nb.	...	
6.	w. s.	7	beq	5	29.359	39.3	37.3	84	39.5	7	...	Cum. & Nb.	...	
7.	w. s.	8	beq	6	29.343	37.8	36.8	91	...	7	...	Cir. str.	Cum. & Nb.	
8.	w. s.	6	beq	6	29.332	39.3	37.8	88	39.8	8	...	Cir. str.	Cum.	
9.	w. s.	7	...	6	29.325	39.8	37.8	84	...	7	...	Cum.	...	
10.	w. s.	6	ocps	6	29.321	39.8	37.8	84	39.0	10	...	Cum. & Nb.	...	Birds seen during the day were albatross, prion, stormy petrel, mollymawk, penguin, and Cape pigeons. Sp. gr. 102499.
11.	w. s.	7	beq	6	29.319	38.8	37.8	92	...	8	...	Cum.	...	
Noon.	w. s.	6	be	6	29.304	38.8	37.8	92	...	8	...	Cir. str.	...	
1.	w. s.	7	beq	6	29.322	39.8	38.3	88	...	8	...	Cum.	...	
2.	w. s.	6	beq	6	29.313	39.3	38.3	92	40.0	9	...	Cum. & Nb.	...	
3.	w. s.	7	beq	6	29.307	40.3	38.8	88	...	9	...	Cum.	...	
4.	w. s.	6	beq	6	29.311	38.8	37.8	92	38.5	8	...	Cum.	...	
5.	w. s.	7	beq	6	29.323	39.3	37.8	88	...	8	...	Cum.	...	
6.	w. s.	6	eq	6	29.328	39.8	37.8	84	38.5	9	...	Cum.	...	
7.	w. s.	7	beq	6	29.313	39.3	38.3	92	...	9	...	Str. & Cum.	...	
8.	w. s.	6	o	6	29.312	39.3	38.5	94	38.0	10	...	Str. & Cum.	...	Sea slightly phosphorescent.
9.	w. s.	5	oe	6	29.310	39.8	38.8	92	...	10	...	Str. & Cum.	...	
10.	w. s.	5	oe	6	29.322	39.8	39.3	96	38.2	10	...	Str. & Cum.	...	
11.	w. s.	5	ocps	6	29.335	39.3	38.8	96	...	10	...	Str. & Cum.	...	
Midt.	w. s.	6	ocps	5	29.356	38.3	37.8	96	38.5	10	...	Cum.	...	
Totals.	...	154	beq	...	8125	219.4	187.6	223	97.0	204	...	Cir. str.	Cum., Str., & Nimb.	
Mean.	w. s.	6		6	29.338	39.1	37.8	89	38.8	8	...			

## WEDNESDAY, 7TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	w.s.w.	6	bcpp	5	29.368	38.8	37.8	92	...	8	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 46° 2, min. 37° 5. During the middle watch penguins were heard croaking close to the ship.
2.	w.s.w.	7	bcpp	5	29.397	38.3	37.3	91	38.7	7	...	Cum.	
3.	swbw.	5	bc	5	29.436	38.3	37.3	91	...	8	...	Str.&Nb.	
4.	swbw.	6	bef	5	29.452	38.3	37.0	89	38.7	8	...	Str.&Cum	
5.	w.s.w.	5	bc	5	29.488	37.8	36.8	91	...	7	...	Str.&Nb.	
6.	s.w.	6	cq	5	29.510	38.3	36.8	88	38.5	7	...	Cum.	
7.	s.w.	5	bcq	...	29.514	37.8	36.8	91	...	7	Cir.	Cum.	
8.	s.w.	6	bcq	...	29.564	39.8	37.8	84	37.8	7	Str.	Cum.	
9.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	wbs.	5	bcq	...	29.599	42.3	39.8	82	...	4	...	Cum.	At 9 A.M., anchored in Christmas har- bour, Kerguelen island.
11.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	w.s.w.	4	bcq	...	29.658	43.8	39.8	71	...	6	...	Cum.	
1.	wbs.	5	bcq	...	29.691	44.3	40.0	69	...	7	...	Cum.	
2.	wbs.	4	bcq	...	29.716	39.3	38.8	96	...	7	...	Cum.	
3.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	wbs.	4	...	...	29.741	39.8	38.8	92	...	...	...	Cum.	
5.	wbs.	3	bcq	...	29.763	41.3	37.3	70	...	8	...	Cm.&Str.	
6.	wbs.	3	bcq	...	29.789	40.8	36.8	70	...	8	...	Cum.	
7.	...	...	...	...	...	...	...	...	...	...	...	...	
8.	wbs.	5	bc	...	29.835	39.3	35.8	74	...	9	...	Cum.	
9.	wbs.	3	cq	...	29.868	38.8	35.8	77	...	10	...	Cum.	
10.	wbs.	3	cq	...	29.868	38.8	35.8	77	...	9	...	Cum.	
11.	wbs.	5	cq	...	29.870	39.3	35.3	70	...	7	...	Cum.	
Midl.	wbs.	3	cq	...	29.870	38.3	35.8	80	...	7	...	Cum.	
Totals.	...	93	...	...	12997	193.5	147.4	1645	17	141	...	...	
Mean.	w.s.w.	5	bcq	...	29.650	39.6	37.4	82	38.4	7	Cir str.	Cum.	

## THURSDAY, 8TH.

1.	wbs.	5	bcq	...	29.856	37.8	35.8	83	...	...	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 41°, min. 35°.
2.	wbs.	3	bcq	...	29.874	37.8	35.8	83	...	...	...	Cum.	
3.	wbs.	4	bc	...	29.889	37.8	35.3	79	...	...	...	Cum.	
4.	wbs.	3	cp	...	29.896	37.8	35.8	83	...	...	...	Cum.	
5.	wbs.	2	bcpmis	...	29.915	37.8	35.8	83	...	8	...	Str.&Cum.	
6.	wbs.	3	bcpmis	...	29.938	37.8	35.8	83	38.5	9	...	Str.&Cum.	
7.	wbs.	3	bcpmis	...	29.925	38.3	36.3	83	...	9	...	Str.&Cum.	
8.	wbs.	4	bcpmis	...	29.923	39.3	36.8	80	38.5	9	...	Cum.	
9.	wbs.	3	...	...	29.902	39.3	36.8	80	...	...	...	Str. cum.	
10.	wbs.	3	bc	...	29.900	38.8	36.8	84	37.8	7	Str.	Cum.	Sp. gr. 1.02502
11.	wbs.	5	bc	...	29.907	38.8	36.8	84	...	9	Str.	Cum.	
Noon.	wbs.	5	bc	...	29.909	38.8	36.8	84	39.5	9	Str.	Cum.	
1.	wbs.	3	bc	...	29.872	39.3	37.3	84	...	9	Str.	Cum.	
2.	wbs.	3	bc	...	29.862	39.5	37.8	86	40.0	9	Str.	Cum.	
3.	swbw.	4	bcpms	...	29.846	38.5	37.5	91	...	10	...	Cum.	
4.	w.s.w.	4	bcpms	...	29.787	38.8	37.8	92	39.5	9	...	Cm.&Nb.	
5.	...	...	...	...	29.779	38.8	38.3	96	...	...	...	Cum.	
6.	s.w.	4	oq	...	29.735	40.0	38.8	90	...	10	...	Cum.	
7.	s.w.	4	oq	...	29.663	40.3	39.3	92	41.0	9	...	Cum.	
8.	s.w.	6	oq	...	29.662	39.3	38.8	96	...	10	...	Cum.	
9.	w.	3	oq	...	29.589	41.8	39.8	85	...	10	...	Cum.	
10.	w.	6	bcq	...	29.597	40.8	39.8	92	41.0	6	Cir.	Cum.	
11.	...	...	bcq	...	29.574	40.8	39.8	92	...	7	Cir.	Cum.	
Midl.	w.	3	bc	...	29.568	40.8	39.8	92	40.5	4	Cir.	Cum.	
Totals.	...	89	...	...	14971	218.8	179.4	157	86.3	153	...	...	
Mean.	w.	4	cpms	...	29.807	39.1	37.5	87	39.6	9	Cir str.	Str. cum	

## FRIDAY, 9TH JANUARY 1871.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level 0 to 5.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Wet Bulb.				Upper.	Lower.	
1.	w.b.s.	3	bc	...	29.461	43.8	41.8	81	...	5	Cir str.	Cum.		At Kerguelen island. Temperature by self-registering thermometer, max. 49°, min. 41°.
2.	xw.b.s.	1	...	...	29.453	43.3	40.8	81	...	...	...	...	...	
3.	s.	1	bcq	...	29.485	42.8	39.8	78	...	3	...	Cum.	...	
4.	Variable.	12	bcq	...	29.496	41.8	37.8	72	...	4	...	Cum.	...	
5.	sw.b.w.	...	bc	...	29.516	42.0	38.8	77	...	7	Cir.	Cum.	...	
6.	sw.b.w.	1	bc	...	29.568	41.8	38.8	78	...	8	Cir.	Str. cum.	...	
7.	sw.b.w.	12	bc	...	29.573	41.8	38.8	78	...	8	...	Str. cum.	...	At anchor in Betsy cove. The hills clouded over.
8.	w.b.s.	1	e	...	29.594	42.8	39.8	78	...	10	...	Cum.	...	
9.	w.b.s.	1	e	...	29.593	42.8	40.3	81	...	10	Cir.	Cum.	...	
10.	w.b.s.	1	e	...	29.596	42.8	39.8	78	...	10	...	Cum.	...	
11.	w.b.s.	1	e	...	29.604	43.8	40.3	74	...	10	...	Cum.	...	
Noon.	w.b.s.	1	bc	...	29.602	44.3	40.3	71	...	7	Cir.	Cum.	...	
1.	w.b.s.	12	bc	...	29.598	46.3	41.3	67	...	...	...	Str.	Cum.	
2.	w.b.s.	4	bcps	...	29.618	45.3	41.3	72	...	...	...	Str.	Cum.	
3.	w.b.s.	12	bc	...	29.626	45.3	41.0	71	...	...	...	Str.	Cum.	
4.	w.	12	bc	...	29.628	45.3	40.3	66	...	...	...	Str.	Cum.	
5.	w.s.w.	12	bc	...	29.641	44.8	39.8	66	...	8	...	Cum.	...	
6.	w.b.s.	3	e	...	29.650	43.8	38.8	65	...	9	...	Cum.	...	
7.	w.b.s.	12	bc	...	29.664	42.8	38.8	71	...	9	...	Cum.	...	
8.	w.s.w.	3	bc	...	29.672	41.3	37.8	75	...	8	...	Cum.	...	
9.	w.s.w.	12	bc	...	29.694	39.8	36.8	76	...	8	...	Cum.	...	
10.	sw.b.w.	1	bc	...	29.705	38.8	35.8	77	...	8	...	Cum.	...	
11.	sw.b.w.	12	bc	...	29.725	38.8	35.8	77	...	8	...	Cum.	...	
Midd.	sw.b.w.	3	bc	...	29.736	39.3	36.3	77	...	7	...	Cum.	...	
Totals.	...	43	...	...	14498	65.4	220.9	110	...	147	...	Cir str.	Cum.	
Mean.	w.	2	bcps	...	29.604	42.7	39.2	75	...	8	...	Cir str.	Cum.	

## SATURDAY, 10TH.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level 0 to 5.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Wet Bulb.				Upper.	Lower.	
1.	sw.b.s.	3	bc	...	29.790	39.3	35.8	74	...	6	Str.	Cum.	...	At Kerguelen island. Temperature by self-registering thermometer, max. 52°, min. 36° 2.
2.	sw.b.s.	12	bc	...	29.821	38.8	35.8	77	...	7	Str.	Cum.	...	
3.	sw.b.s.	12	bc	...	29.842	38.8	35.8	77	...	7	Str.	Cum.	...	
4.	sw.b.s.	12	bc	...	29.872	38.8	35.8	77	...	7	Str.	Cum.	...	
5.	sw.b.w.	3	bc	...	29.927	39.5	36.8	78	...	8	...	Cum.	...	
6.	sw.b.s.	4	bcq	...	29.958	38.8	37.3	88	...	6	...	Cum str.	...	
7.	sw.b.s.	3	bc	...	29.972	41.8	38.8	78	...	6	...	...	...	In Betsy cove. The clouds light and decy. The hills to the northward not seen the sky being misty in that direction.
8.	w.s.w.	12	bc	...	29.979	41.8	38.8	78	...	7	Str.	Cum.	...	
9.	w.s.w.	1	bc	...	29.982	43.8	39.8	71	...	8	Str.	Cum.	...	
10.	w.s.w.	1	bc	...	29.982	45.8	41.8	70	...	9	Str.	Cum.	...	
11.	sw.b.e.	1	bc	...	29.994	46.3	41.3	70	...	9	Str.	Cum.	...	
Noon.	sw.b.e.	3	bc	...	29.996	47.8	42.8	67	...	9	Str.	Cum.	...	
1.	N.W.	2	bc	...	29.996	45.8	42.8	79	...	8	Str.	Cum.	...	
2.	N.W.	3	bc	...	30.012	44.8	42.3	79	...	8	Str.	Cum.	...	
3.	N.W.	2	bc	...	30.013	45.8	42.8	79	...	8	Cir str.	Cum.	...	
4.	sw.b.s.	1	bc	...	30.009	45.8	43.3	82	...	7	Cir str.	Cum.	...	
5.	sw.b.w.	1	bc	...	30.016	45.3	41.8	75	...	8	Cir.	Cum.	...	
6.	w.s.w.	1	...	...	30.022	44.3	40.8	74	...	...	...	...	...	
7.	w.s.w.	2	bc	...	30.004	43.8	39.8	71	...	9	...	Cum.	...	
8.	w.s.w.	3	bc	...	29.983	42.8	39.8	78	...	9	...	Cum.	...	
9.	w.s.w.	2	bc	...	29.977	42.8	39.8	78	...	8	...	Cum.	...	
10.	N.W.	3	bc	...	29.980	41.8	40.3	88	...	7	Str.	Cum.	...	
11.	N.W.	2	bc	...	29.970	41.8	40.3	88	...	6	...	Cum.	...	
Midd.	N.W.	3	bc	...	29.961	41.8	40.3	88	...	6	...	Cum.	...	
Totals.	...	53	bc	...	23058	67.9	234.7	187	...	172	...	Str.	Cum.	
Mean.	w.b.s.	2	...	...	29.961	42.8	39.8	78	...	7	...	Str.	Cum.	

SUNDAY, 11TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
1.	NW by N.	1	bc	...	29.957	41.8	40.8	92	...	8	...	Cum.		At Kerguelen island. Temperature by self-registering thermo- meter, max. 55°, min. 40°.
2.	NW by N.	2	bc	...	29.940	42.3	41.3	92	...	8	...	Cum.		
3.	NW by N.	1	bc	...	29.932	42.8	41.8	92	...	8	...	Cum.		
4.	NW by N.	1	bc	...	29.922	42.8	41.8	92	...	8	...	Str.		
5.	N.W.	1	bc	...	29.961	42.8	41.8	92	...	5	...	Str.		
6.	N.E.	1	bc	...	29.980	50.3	48.3	86	...	6	...	Cir str.		
7.	N.E.	1	bc	...	29.975	50.0	48.3	88	...	4	...	Cir str.		
8.	NE by N.	1	bc	...	29.995	51.8	47.5	73	...	5	...	Cir.	Str. & Cum.	
9.	N.E.	1	bc	...	29.998	54.8	48.8	65	...	3	...	Cir.	Cum. & Str.	
10.	N.E.	1	bc	...	30.015	51.8	45.8	64	...	4	...	Cir.	Cum.	
11.	N.E.	1	bc	...	30.023	49.5	45.8	74	...	4	...	Cir.	Cum.	
Noon.	N.E.	1	bc	...	30.040	50.8	46.8	74	...	4	...	Cir.	Cum.	
1.	N.E.	1	bc	...	30.033	49.8	46.3	77	...	4	...	Cir.	Cum.	
2.	N.E.	1	bc	...	30.043	48.3	44.8	76	...	4	...	Cir.	Cum.	
3.	N.E.	1	bc	...	30.044	47.3	43.8	76	...	4	...	Cir.	Cum.	
4.	N.E.	2	bc	...	30.056	47.8	43.8	73	...	4	...	Cir.	Cum.	
5.	N.E.	1	bc	...	30.066	46.3	42.8	76	...	5	...	Cir.	Cum.	
6.	N.E.	1	bc	...	30.049	46.3	42.3	73	...	6	...	Cir.	Cum.	
7.	N.E.	1	bc	...	30.052	44.3	41.8	81	...	6	...	Cir.	Cum.	
8.	N.E.	1	bc	...	30.054	44.3	40.8	74	...	8	...	Cir.	Cum.	
9.	N.E.	1	bc	...	30.033	43.3	40.8	81	...	8	...	...	Cum.	
10.	N.E.	1	bc	...	30.019	42.8	40.8	84	...	8	...	...	Cum.	
11.	N.E.	2	bc	...	29.994	41.8	39.8	85	...	8	...	...	Cum.	
Midd.	N.E.	1	bc	...	29.964	41.3	39.8	88	...	8	...	...	Cum.	
Totals.	...	27	bc	...	1445	155.1	86.4	1928	...	140	...	Cir.	Cum.	
Mean.	N.	1	bc	...	30.006	46.5	43.6	80	...	6	...	Cir.	Cum.	

MONDAY, 12TH.

1.	N.E.	1	bc	...	29.960	40.8	39.8	92	...	8	...	Cum.		At Kerguelen island. Temperature by self-registering thermo- meter, max. 60°, min. 39°5.
2.	N.E.	1	bc	...	29.922	40.8	39.8	92	...	7	...	Cum.		
3.	N.E.	1	ocr	...	29.877	40.8	40.3	96	...	7	...	Cum.		
4.	N.E.	1	ocr	...	29.817	41.8	41.3	96	...	8	...	Cum.		
5.	N.E.	2	ocr	...	29.702	42.8	41.8	92	...	10	...	Cum.		
6.	N.E.	3	odf	...	29.583	43.8	42.8	92	...	10	...	Cum. & Nb.		
7.	N.E.	7	ocr	...	29.498	45.8	45.3	96	...	10	...	Cum.		
8.	N.N.W.	7	ocr	...	29.405	45.8	45.8	100	...	10	...	Cum.		
9.	NW by N.	7	ocr	...	29.387	45.3	45.3	100	...	10	...	Cum.		
10.	N.W.	5	beqm	...	29.402	46.3	46.0	98	...	8	...	Str. & Cum.		
11.	N.	3	beqm	...	29.439	47.8	46.8	93	...	5	...	Cum.		
Noon.	N.N.E.	2	bc	...	29.457	51.3	47.8	77	...	1	...	Cum.		
1.	NW by N.	2	bc	...	29.450	55.8	52.3	78	...	1	...	Str.		
2.	NW by N.	2	bc	...	29.480	57.8	53.0	72	...	1	...	Cir str.		
3.	NW by N.	2	bc	...	29.502	56.3	51.0	69	...	1	...	Cir.		
4.	NW by N.	2	bc	...	29.527	55.8	49.3	62	...	1	...	Cir.		
5.	N.N.W.	2	bc	...	29.537	54.8	48.8	65	...	1	...	Cir.		
6.	N.N.W.	3	b	...	29.591	52.8	47.8	69	...	0	...	...		
7.	NbN.	2	b	...	29.606	50.8	46.3	71	...	0	...	...		
8.	NbN.	3	bc	...	29.613	48.3	44.8	76	...	1	...	Cir.	Str.	
9.	NbN.	2	bc	...	29.654	47.3	44.3	79	...	2	...	Cir.	Str.	
10.	E.	1	bc	...	29.676	45.8	43.3	83	...	3	...	Str.		
11.	E.	1	bc	...	29.679	44.3	42.8	89	...	2	...	Str.		
Midd.	NbN.	1	bc	...	29.684	43.0	41.3	87	...	3	...	Str.		
Totals.	...	61	beqm	...	14478	185.9	127.8	2024	...	110	...	Cir.	Cum. & Str.	
Mean.	N.W.	3	beqm	...	29.603	47.7	45.3	84	...	5	...	Cir.	Cum. & Str.	

## TUESDAY, 13TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
1.	E.S.	1	bc	...	29.711	42.8	41.3	88	...	3	...	Str.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 51°, min. 38° 5.
2.	E.S.	1	b	...	29.718	41.3	39.5	86	...	0	...	...	
3.	w.b.s.	1	bc	...	29.740	40.3	38.8	88	...	3	...	Cum.	In Betsy cove.
4.	sw.b.s.	1	bc	...	29.726	41.3	37.8	75	...	...	...	Str. cum.	
5.	w.b.s.	1	bc	...	29.725	40.8	37.8	77	...	...	...	Str.	In Betsy cove.
6.	w.b.s.	1	bc	...	29.725	40.8	37.8	77	...	...	...	Cir.	
7.	w.b.s.	2	bc	...	29.722	41.8	38.8	78	...	...	...	Cum.	In Betsy cove.
8.	sw.b.s.	1	bc	...	29.701	45.8	41.8	73	...	...	...	Cum str.	
9.	sw.b.s.	2	bc	...	29.702	45.8	40.8	67	...	...	...	Cum.	In Betsy cove.
10.	sw.b.s.	3	bc	...	29.701	45.3	40.8	70	...	...	...	Cum.	
11.	sw.b.s.	3	bc	...	29.702	46.3	40.8	65	...	...	...	Cum.	In Betsy cove.
Noon.	sw.b.s.	4	bc	...	29.728	47.3	41.3	61	...	...	...	Cum.	
1.	w.b.s.	3	bc	...	29.715	48.8	41.8	57	...	...	...	Cir.	In Betsy cove.
2.	w.b.s.	4	bcq	...	29.737	49.3	42.3	57	...	...	...	Cir str.	
3.	w.	3	bcq	...	29.735	49.3	43.8	65	...	...	...	Str.	In Betsy cove.
4.	w.	4	bcq	...	29.734	47.3	41.3	61	...	...	...	Cir str.	
5.	w.	3	bcq	...	29.730	45.8	40.8	67	...	...	...	Cir str.	In Betsy cove.
6.	w.	4	bcq	...	29.730	44.5	39.3	64	...	...	...	Cir str.	
7.	sw.b.w.	3	bc	...	29.753	43.3	39.8	74	...	...	...	Cir.	In Betsy cove.
8.	sw.b.w.	3	bc	...	29.767	43.3	39.8	74	...	...	...	Cir.	
9.	sw.b.s.	3	bc	...	29.756	43.3	39.8	74	...	...	...	Cum.	In Betsy cove.
10.	sw.b.s.	3	bc	...	29.753	42.8	40.3	81	...	...	...	Cum.	
11.	sw.b.s.	3	bc	...	29.753	42.8	40.3	81	...	...	...	Cum.	In Betsy cove.
Midt.	sw.b.s.	3	bc	...	29.755	42.3	41.3	92	...	...	...	Cum.	
Totals.	...	56	bcq	...	17522	102.4	7.9	1752	...	146	Cir str.	Cum.	
Mean.	sw.b.w.	2		...	29.730	44.3	40.3	73	...	6			

## WEDNESDAY, 14TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
1.	n.w.	4	bcq	...	29.753	41.3	39.8	88	...	5	...	Str. & Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 50°, min. 40° 5.
2.	sw.b.w.	2	bcq	...	29.738	41.3	40.3	92	...	5	...	Str. & Cum.	
3.	sw.b.s.	3	bcq	...	29.741	41.3	40.3	92	...	8	...	Cum.	In Betsy cove.
4.	sw.b.s.	2	bcq	...	29.735	41.8	40.8	92	...	8	...	Str. cum.	
5.	sw.b.s.	2	bcqm	...	29.739	41.8	40.8	92	...	8	...	Str. cum.	In Betsy cove.
6.	sw.b.s.	2	bcqm	...	29.713	41.8	40.8	92	...	9	...	Cir.	
7.	sw.b.s.	3	bcqm	...	29.711	42.3	41.8	96	...	9	...	Cum.	In Betsy cove.
8.	n.w.	1	om	...	29.678	42.8	41.8	92	...	9	...	Cir.	
9.	sw.b.w.	3	om	...	29.665	43.3	42.8	96	...	10	...	Cum.	In Betsy cove.
10.	n.w.	3	om	...	29.651	45.8	44.9	87	...	9	...	Cir.	
11.	sw.b.s.	4	bc	...	29.629	45.8	44.8	93	...	8	...	Cum.	In Betsy cove.
Noon.	sw.b.s.	4	bcq	...	29.612	46.8	44.8	86	...	8	...	Cir.	
1.	sw.b.s.	3	bcq	...	29.608	47.8	45.8	86	...	6	...	Cum.	In Betsy cove.
2.	sw.b.s.	5	bcq	...	29.596	47.8	46.3	89	...	6	...	Cum.	
3.	sw.b.s.	3	bcq	...	29.565	47.8	46.3	89	...	5	...	Cum.	In Betsy cove.
4.	n.w.	5	bc	...	29.558	46.8	45.3	90	...	6	...	Cum.	
5.	sw.b.w.	3	oq	...	29.548	45.8	44.8	93	...	10	...	Cum.	In Betsy cove.
6.	sw.b.w.	5	oq	...	29.548	44.8	43.8	92	...	10	...	Cum.	
7.	sw.b.w.	3	oq	...	29.506	44.8	43.8	92	...	10	...	Cum.	In Betsy cove.
8.	sw.b.w.	5	oq	...	29.470	44.8	43.8	92	...	10	...	Cum.	
9.	sw.b.s.	3	omq	...	29.472	44.8	43.8	92	...	10	...	Cum.	In Betsy cove.
10.	n.w.	6	omq	...	29.436	44.8	43.8	92	...	10	...	Str. & Cum.	
11.	sw.b.s.	3	oq	...	29.416	44.3	43.8	96	...	9	...	Str. & Cum.	In Betsy cove.
Midt.	sw.b.s.	5	omq	...	29.396	44.3	43.8	96	...	9	...	Str. & Cum.	
Totals.	...	89	bcqm	...	14484	104.7	77.9	37	...	192	Cir.	Str. & Cum.	
Mean.	n.w.	3		...	29.603	44.4	43.2	91	...	8			

## THURSDAY, 15TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	swby.	4	om	...	29.372	43.8	43.3	96	...	10	...	Cum str.	At Kerguelen island. Temperature by self-registering thermometer, max. 51° 0, min. 41° 5.
2.	swby.	4	or	...	29.331	44.3	44.3	100	...	10	...	Cum str.	
3.	...	2	or	...	29.296	44.3	44.3	100	...	10	...	Cum str.	
4.	wby.	1	or	...	29.258	44.8	44.8	100	...	10	...	Cum str.	
5.	swby.	2	om	...	29.251	44.8	44.8	100	...	10	...	Nimb. Str.	In Betsy cove.
6.	N.W.	3	fr	...	29.239	43.8	43.8	100	...	10	...	...	
7.	N.W.	4	om	...	29.246	43.8	43.8	100	...	10	...	Str. & Cum.	
8.	swby.	3	ben	...	29.219	43.8	43.5	98	...	7	Cir str.	Cum.	
9.	swby.	2	ben	...	29.233	44.3	43.8	96	...	7	...	Cum.	
10.	swby.	3	ben	...	29.236	45.8	44.8	93	...	5	...	Cum.	
11.	N.W.	2	be	...	29.258	47.5	44.8	81	...	6	Cir.	Cum.	
Noon.	N.W.	3	be	...	29.248	48.8	45.3	76	...	5	Cir.	Cum.	
1.	wby.	4	be	...	29.243	50.8	44.8	63	...	6	Cir.	Cum. & Str.	
2.	N.W.	3	be	...	29.258	48.3	44.8	76	...	3	...	Cum. & Str.	
3.	swby.	5	beq	...	29.269	47.5	44.8	81	...	3	Cir.	Str.	
4.	w. N. W.	3	beq	...	29.263	46.3	43.8	83	...	3	...	Cum. & Str.	
5.	wby.	5	beq	...	29.270	46.3	42.8	76	...	4	Cir.	Cum. & Str.	
6.	wby.	3	beq	...	29.318	45.8	41.3	70	...	5	...	Cum.	
7.	wby.	5	beq	...	29.352	44.3	40.8	74	...	5	...	Cum.	
8.	wby.	4	beq	...	29.383	43.8	40.8	77	...	6	...	Cum.	
9.	wby.	5	beq	...	29.406	43.5	41.3	83	...	7	...	Cum.	
10.	wby.	3	beq	...	29.442	42.8	40.8	84	...	8	...	Cum.	
11.	wby.	6	beq	...	29.456	42.8	40.8	84	...	8	...	Cum.	
Midt.	swby.	3	beq	...	29.465	42.8	39.8	78	...	9	...	Cum.	
Totals.	...	82	...	...	7312	124.8	77.9	2069	...	167	...	...	Cir str. Cum. & Cum str.
Mean.	swby.	3	beqmr	...	29.305	45.2	43.2	86	...	7	...	...	

## FRIDAY, 16TH.

1.	w. N. W.	3	beq	...	29.486	42.3	39.8	82	...	7	...	Cum. & Str.	At Kerguelen island. Temperature by self-registering thermometer, max. 47°, min. 42°.
2.	w. N. W.	5	beq	...	29.490	42.3	39.8	82	...	8	...	Cum. & Str.	
3.	swby.	2	beq	...	29.497	41.8	39.8	85	...	8	...	Cum. & Str.	
4.	swby.	5	beq	...	29.522	41.8	38.8	78	...	8	...	Cum. & Str.	
5.	swby.	3	beq	...	29.532	42.3	38.8	75	...	7	...	Cum. & Str.	7 A.M., left Betsy cove for Royal sound.
6.	wby.	5	beq	...	29.531	43.3	40.8	81	...	9	Cir.	Cum. & Nl.	
7.	swby.	3	beq	...	29.548	43.3	41.8	88	...	9	...	Cum. & Nl.	
8.	swby.	6	be	...	29.549	43.3	41.8	88	12.0	8	Str.	Str. & Cum.	
9.	w.	6	beqmr	...	29.548	42.8	41.8	92	...	8	Str.	Cum.	
10.	w.	7	beqmr	3	29.566	43.8	41.8	84	41.5	7	Str.	Cum.	
11.	w. N. W.	8	beqmr	4	29.546	44.5	42.5	84	...	5	Cir.	Cum.	
Noon.	w. N. W.	7	beqmr	3	29.564	44.8	42.8	85	41.0	6	Cir.	Cum.	
1.	wby.	8	eqmr	3	29.516	45.0	43.5	89	...	7	Cir str.	...	
2.	wby.	7	eqmr	3	29.565	44.3	43.3	92	41.0	9	...	Str.	
3.	wby.	6	em	4	29.575	44.8	43.5	90	...	10	...	Str.	
4.	wby.	7	ben	4	29.549	45.3	43.8	88	41.0	7	Cir cum.	Str.	
5.	wby.	7	ben	...	29.597	45.3	41.8	96	...	7	Cir.	Str.	
6.	wby.	8	ben	...	29.519	46.3	44.5	88	...	8	Cir.	Str.	
7.	N.W.	7	beqmr	4	29.469	45.3	44.3	92	...	5	Cir.	Str.	
8.	N.W.	8	beqmr	4	29.437	45.8	44.8	93	11.0	7	Cir str.	Cum.	
9.	N.Wby.	7	beqmr	4	29.424	45.8	44.8	93	...	6	...	Cum.	
10.	N.Wby.	10	eqp	5	29.425	45.8	44.8	93	41.0	6	...	Cum. & Nl.	
11.	N.Wby.	7	beqmr	5	29.456	45.8	44.8	93	...	6	...	Cum. & Nl.	
Midt.	N.Wby.	8	eqmr	5	29.457	44.8	44.3	96	11.0	5	...	Cum. & Nl.	
Totals.	...	150	...	54	12368	100.6	60.5	2107	9.5	173	...	...	Cir str. Cum., Str., & Nimb.
Mean.	w. N. W.	6	beqmr	4	29.515	44.2	42.5	88	41.2	7	...	...	

## SATURDAY, 17TH JANUARY 1871.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	swbw.	8	om	...	29.504	44.0	43.8	98	...	10	...	Str.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 49°, min. 40°.
2.	N.W.	7	bcm	...	29.585	43.0	42.5	97	40.0	7	...	Str. cum.	
3.	WN.	7	he	...	29.629	42.8	41.8	92	...	9	...	Str.	
4.	WN.	6	be	...	29.632	42.0	40.8	90	40.0	8	...	Str. cum.	At noon, off Prince of Wales foreland. At 8 p.m., anchored in Island harbour, Royal sound.
5.	...	...	...	...	29.654	41.3	40.8	96	...	8	...	Str. cum.	
6.	WN.	6	be	...	29.705	41.0	39.0	84	40.2	4	Cir str.	Str. cum.	
7.	WN.	6	be	...	29.716	41.3	39.8	88	...	5	Cir.	Cm. & Str.	
8.	swbw.	5	be	...	29.726	41.3	39.8	88	40.0	7	Cir.	Cm. & Str.	
9.	swbw.	4	be	...	29.736	42.3	40.3	84	...	6	Cir.	Cm. & Str.	
10.	swbw.	3	bcm	...	29.766	42.8	41.8	92	41.0	7	Cir str.	...	
11.	swbw.	4	bcm	...	29.774	45.3	42.0	76	...	7	Cir cum.	Str.	
Noon.	...	...	...	...	29.797	45.8	42.8	79	42.0	6	Cir str.	...	
1.	SEBS.	12	be	...	29.814	43.8	41.0	78	...	5	Cir.	Str.	
2.	SEBS.	12	bcm	...	29.820	43.8	42.3	88	...	6	Cir.	Str.	
3.	SEBS.	3	bcm	...	29.802	42.8	40.8	84	...	7	Cir.	Str.	
4.	SEBS.	3	bcm	...	29.845	42.8	41.8	92	...	9	Cir.	Str.	
5.	ES.	2	oem	...	29.818	42.0	40.8	92	...	10	Str.	Cum.	
6.	ES.	1	oem	...	29.823	42.8	42.3	96	...	10	...	Str.	
7.	ES.	2	c	...	29.817	43.0	41.8	90	...	10	...	Str. & Cum.	
8.	ES.	1	c	...	29.839	43.8	43.3	96	...	10	...	Str. & Cum.	
9.	ES.	1	c	...	29.822	43.8	43.3	96	...	10	...	Cum.	
10.	ES.	1	oe	...	29.809	43.8	42.8	92	...	10	...	Str. cum.	
11.	Calm.	0	oe	...	29.810	43.8	42.8	92	...	10	...	Cum.	
Midt.	Calm.	0	oe	...	29.775	43.8	43.3	96	...	10	...	Cum.	
Totals.	...	76	...	...	18018	72.9	41.5	2156	3.2	191	Cir str.	Str. cum.	
Mean. Variable.	3	...	...	...	29.751	43.0	41.7	89	40.5	8	...	...	

## SUNDAY, 18TH.

1.	E.	1	em	...	29.750	43.8	42.8	92	...	10	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 58°, min. 42°.
2.	NE'E.	1	cum	...	29.736	43.8	42.8	92	42.5	10	...	Cum.	
3.	NE'E.	1	cum	...	29.694	...	...	...	...	10	...	Cum.	
4.	ES.	1	bcm	...	29.649	46.3	44.8	90	43.0	8	...	Str.	In Island harbour.  At noon a westerly gale sprung up and lasted until 5 p.m.
5.	ES.	1	op	...	29.601	45.8	45.8	100	...	10	...	Cum.	
6.	E.	2	adm	...	29.543	49.8	49.8	100	...	10	...	Cm. & Str.	
7.	N.N.E.	3	om	...	29.450	50.5	50.0	96	...	10	...	Cm. & Str.	
8.	N'E.	3	omr	...	29.401	49.8	49.8	100	...	10	...	Cm. & N.b.	
9.	N.E.	4	omr	...	29.299	49.8	49.8	100	...	10	...	Cum str.	
10.	N.E.	5	omr	...	29.193	49.8	49.8	100	...	10	...	Cum str.	
11.	N.E.	4	omr	...	29.127	50.3	49.8	96	...	10	...	Cum str.	
Noon.	N'E.	5	omr	...	29.107	53.3	52.8	97	...	10	...	Cum str.	
1.	N.N.W.	7	beq	...	29.029	56.8	54.8	87	...	7	...	Cum.	
2.	N.W.	9	beq	...	29.047	55.8	53.8	87	...	9	...	Cum.	
3.	N.W.	6	beq	...	29.109	54.8	53.5	91	...	6	...	Cm. & Str.	Bright flashes of aurora australis from SE'S to SW'S.
4.	swbw.	6	beq	...	29.155	55.0	52.8	86	...	5	...	Cum.	
5.	swbw.	6	beq	...	29.198	54.8	52.8	87	...	5	Cir.	Cum.	
6.	swbw.	3	be	...	29.226	54.8	51.8	81	45.0	4	Cir.	Cum.	
7.	N.W.	3	be	...	29.290	52.8	49.8	80	...	1	...	Cum.	
8.	N.W.	2	be	...	29.325	51.0	48.5	83	...	4	...	Cm. & Str.	
9.	N.W.	2	be	...	29.349	49.8	46.8	80	...	1	Cir.	Cum.	
10.	N.W.	4	be	...	29.360	49.0	45.8	78	...	1	...	Str.	
11.	N.W.	2	b	...	29.362	48.3	45.8	83	...	0	...	...	
Midt.	S.S.F.	1	b	...	29.376	46.8	46.3	96	...	0	...	...	
Totals.	...	83	...	...	8375	12.7	210.5	208.2	10.5	161	Cir.	Cum. & Cum str.	
Mean.	N.	3	...	...	29.349	50.5	49.1	91	43.5	7	...	...	

## MONDAY, 19TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N.W.b.N.	1	bc	...	29.389	46.8	44.8	86	...	2	...	Str.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 60°, min. 44°.
2.	Calm.	0	bc	...	29.395	47.3	44.8	83	...	2	...	Str.	
3.	Calm.	0	bc	...	29.395	47.3	45.3	86	...	4	...	Str.&Cum.	
4.	N.W.b.N.	1	or	...	29.395	47.3	45.3	86	...	10	...	Str.	
5.	S.	1	ocpm	...	29.405	46.8	44.8	86	...	10	...	Str.	
6.	E.b.S.	1	cu	...	29.421	46.8	45.3	89	...	10	...	Str.	
7.	S.E.b.S.	1	cu	...	29.432	47.8	46.3	90	...	10	...	Str. cum.	
8.	S.W.b.W.	1	bc	...	29.447	48.8	47.3	90	...	9	...	Str. cum.	In Island harbour. Royal sound.
9.	S.W.b.W.	1	bc	...	29.445	49.8	48.3	90	...	10	Cir.	Cum.	
10.	W.b.N.	1	bc	...	29.470	52.8	49.8	80	...	6	...	Str.&Cum.	
11.	N.W.	2	bc	...	29.492	53.8	50.8	80	...	9	...	Str.&Cum.	
Noon.	N.W.	3	bc	...	29.501	55.5	51.0	72	...	8	...	Str.&Cum.	
1.	N.W.	1	bc	...	29.442	57.3	52.3	70	...	6	...	Str.&Cum.	
2.	W.b.N.	3	bc	...	29.534	56.8	51.8	70	...	7	...	Str.&Cum.	
3.	S.W.b.W.	4	bc	...	29.570	53.8	49.3	71	...	6	Cir.	Str.&Cum.	
4.	S.W.b.S.	3	bc	...	29.633	50.8	46.8	74	...	6	Cir.	Str.&Cum.	
5.	S.W.b.W.	4	bc	...	29.717	46.8	43.8	79	...	6	Cr.&Cr. cum.	Cum.&Str.	
6.	S.W.b.W.	3	bc	...	29.753	46.5	43.3	77	...	4	Cir.	Cum.&Str.	
7.	S.W.b.W.	3	bc	...	29.780	45.8	42.8	79	...	4	Cir.	Cum.&Str.	
8.	S.W.	3	bc	...	29.819	43.8	42.3	88	...	6	Cir.	Cum.	
9.	S.W.	2	bc	...	29.857	43.8	41.8	84	...	6	Cir.	Cum.	
10.	W.S.W.	1	bc	...	29.876	44.3	41.8	81	...	6	...	Cum str.	
11.	W.S.W.	3	bc	...	29.895	42.8	40.8	84	...	5	...	Cum str.	
Midt.	W.S.W.	2	bc	...	29.911	42.3	40.3	85	...	5	...	Cum str.	
Totals.	...	45		...	13974	205.6	140.9	1960	...	157			
			bcomp										
Mean.	W.S.W.	2		...	29.582	48.6	45.9	82	...	7	Cir.	Str. & Cum.	

## TUESDAY, 20TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	W.S.W.	2	bc	...	29.948	41.8	39.8	85	...	4	...	Cum.&Str.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 59° 5', min. 39° 5'.
2.	W.S.W.	2	bc	...	30.007	41.8	39.8	85	...	4	...	Cum.&Str.	
3.	W.S.W.	1	bc	...	30.007	41.8	39.8	85	...	4	Cir.	Cum.&Str.	
4.	W.S.W.	1	bc	...	30.011	41.8	39.8	85	...	3	Cir.	Cum.&Str.	
5.	Calm.	0	bc	...	30.015	40.8	39.8	92	...	3	Cir.	Cum.&Str.	
6.	Calm.	0	bc	...	30.024	43.8	41.3	80	...	2	Cir.	Cum.&Str.	
7.	Calm.	0	b	...	30.022	44.3	41.8	81	...	0	...	...	
8.	Calm.	0	bc	...	30.022	45.8	42.8	79	...	1	Cir.	Str.	
9.	S.W.b.W.	1	bc	...	29.998	45.3	42.8	82	...	1	Cir.	Str.	
10.	S.W.b.W.	1	bc	...	29.969	49.8	45.3	71	...	3	Cir.	Str.	In Royal sound.
11.	S.W.b.W.	1	bc	...	29.956	52.8	46.8	64	...	4	Cir.	Cum.&Str.	
Noon.	N.W.b.N.	2	bc	...	29.936	55.3	47.8	58	...	6	Cir.	Cum.&Str.	
1.	N.W.	3	bc	...	29.934	56.8	48.3	55	...	6	Cir.	Cum.&Str.	
2.	N.W.	2	bc	...	29.943	56.3	48.8	58	...	6	...	Cum.	
3.	W.b.N.	2	bc	...	29.916	53.8	47.5	63	...	7	Cir.	Cum.&Str.	
4.	W.b.N.	2	bc	...	29.893	51.0	47.8	79	...	8	Cir.	Cum.&Str.	
5.	N.E.	3	bc	...	29.880	50.8	47.8	80	...	9	Cir.	Cum.&Str.	
6.	N.E.W.	2	bc	...	29.877	49.8	47.8	86	...	8	Cir.	Cum.&Str.	
7.	S.W.b.W.	1	bc	...	29.891	50.3	47.8	83	...	8	Cir.	Cum.&Str.	
8.	N.W.b.W.	1	bc	...	29.873	49.8	47.8	86	...	9	Cir.	Cum.&Str.	
9.	N.E.	2	bc	...	29.845	47.8	46.8	93	...	6	...	Cum.&Str.	
10.	N.	1	bc	...	29.846	47.8	44.8	79	41.0	7	Str.	Cum.	
11.	S.E.	1	bc	...	29.861	48.8	46.8	86	...	6	Str.	Cum.	
Midt.	Calm.	0	bc	...	29.841	48.8	46.3	83	42.5	5	Str.	Cum.	
Totals.	...	31		...	22515	196.9	115.9	1878	3.5	120			
			bc										
Mean.	Variable.	1		...	29.938	48.2	41.8	78	41.7	5	Cir.&Str.	Str. & Cum.	

## WEDNESDAY, 21st JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea. 6 to 9.	Barometre reduced and Sea-Level	Thermometer		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	Calm.	0	bc	...	29.819	48.0	46.3	88	...	7	...	Cm.&Str.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 49° 7', min. 40° 5'.
2.	xwbs.	2	c	...	29.802	48.8	46.8	86	...	9	...	Cm.&Str.	
3.	xwbs.	3	bc	...	29.777	48.3	46.8	90	...	8	...	Cm.&Str.	
4.	xwbs.	1	c	...	29.772	47.8	46.3	90	...	9	...	Cm.&Str.	
5.	xwbs.	2	c	...	29.755	47.8	46.3	90	...	8	...	Cm.&Str.	
6.	xwbs.	1	or	...	29.724	47.3	46.8	96	...	10	...	Cm.&Str.	6 A.M., left Royal sound and anchored in Greenland harbour at 0.30 P.M.
7.	sbs.	1	or	...	29.720	45.3	43.8	90	...	10	...	Cum.	
8.	sbs.	1	oc	...	29.720	44.3	43.3	92	...	10	...	Cum.	
9.	s.w.	4	hem	...	29.751	43.8	42.3	88	...	7	...	Cm.&Nls.	
10.	s.w.	6	bcq	...	29.761	42.8	39.8	78	...	7	...	Cum.	
11.	x.w.	8	bcq	...	29.751	42.8	40.8	84	...	6	...	Cum.	
Noon.	x.w.	5	bcq	...	29.806	43.3	41.3	84	...	6	...	Cum.	
1.	wbs.	6	bcq	...	29.818	46.8	42.3	70	...	7	Cir.	Cum.	
2.	w.	5	bcq	...	29.844	46.8	40.8	61	...	5	Cir.	Cum.	
3.	w.	6	bcq	...	29.874	45.8	39.8	61	...	5	Cir.	Cum.	
4.	w.	5	bcq	...	29.872	45.3	39.8	63	...	5	Cir.	Cum.	
5.	w.	6	bcq	...	29.876	45.3	41.8	75	...	5	Cir.	Cum.	
6.	w.	7	bcq	...	29.889	45.3	40.8	69	...	5	...	Cum.	
7.	w.	4	bc	...	29.907	44.8	40.8	72	...	4	Cir.	Cum.	
8.	wbs.	2	bc	...	29.932	44.8	40.3	69	...	3	Cir.	Cum.	
9.	wbs.	2	bc	...	29.936	41.8	38.8	78	...	5	Cir.	Cum.	
10.	wbs.	2	bc	...	29.944	41.8	38.8	78	...	7	Cir.	Cum.	
11.	wbs.	2	bc	...	29.947	41.3	38.3	77	...	7	...	Cum.	
Midt.	wbs.	2	bc	...	29.970	41.3	38.3	77	...	7	...	Cum.	
Totals.	...	83	bcqp	...	19967	121.4	52.2	1906	...	162	Cir.	Str. & Cum.	
Mean.	w.	3		...	29.832	45.1	42.2	79	...	7			

## THURSDAY, 22d.

1.	wbs.	1	bc	...	29.955	40.8	38.8	84	...	6	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 45° 2', min. 38° 0'.
2.	wbs.	2	hem	...	29.960	39.3	37.8	88	...	6	...	Cum.	
3.	wbs.	2	bc	...	29.945	39.8	37.8	84	...	4	...	Cum.	1.30 A.M., a sharp hail shower. 5 A.M., left Greenland harbour for Betsy cove.
4.	wbs.	1	bc	...	29.951	39.8	37.8	84	...	5	Cir.	Cum.	
5.	wbs.	2	opms	...	29.979	39.8	37.8	84	...	10	...	Cum.	
6.	wbs.	5	bcqp	...	29.978	39.3	38.0	90	...	8	Str.	Cum.	
7.	wbs.	6	bcq	3	29.991	39.5	37.8	86	...	8	...	Cum.	
8.	wbs.	5	bcq	3	30.001	42.3	40.0	83	...	...	...	Cm&Cmst.	
9.	...	...	bcqp	2	...	...	...	...	...	7	...	Cm&Cmst.	
10.	wbs.	3	bcqp	...	30.017	40.8	37.8	77	...	7	...	Cum.	
11.	wbs.	5	bc	3	30.069	41.8	39.3	82	...	7	...	Cum.	
Noon.	wbs.	2	bcq	...	30.094	42.3	37.8	69	...	7	...	Cum.	
1.	wbs.	5	bcq	...	30.128	43.8	39.5	70	...	7	Cir cum.	Cum str.	
2.	w.	4	bcq	...	30.130	44.3	39.5	68	40.0	4	Str.	Cum.	
3.	wbs.	3	bc	...	30.132	44.3	40.3	71	...	4	Str.	Cum.	
4.	w.N.W.	4	bc	...	30.126	43.8	41.3	77	40.5	4	...	Cum.	
5.	w.N.W.	3	bc	2	30.130	43.8	40.8	77	...	3	Cir.	Cum str.	A whale seen.
6.	w.N.W.	3	bc	...	30.132	42.8	39.8	78	40.5	5	Cir.	Cum str.	
7.	xwbs.	4	bc	2	30.114	41.3	39.3	84	...	9	Cir.	Str.	
8.	xwbs.	5	bc	2	30.107	40.3	38.0	82	40.0	7	Cir.	Str.	
9.	xwbs.	4	bc	2	30.134	39.8	38.3	88	...	6	...	Str. & Cum.	
10.	xwbs.	4	bc	2	30.087	39.8	38.3	88	40.0	6	...	Str. & Cum.	
11.	xwbs.	5	bc	3	30.079	39.8	37.8	84	...	7	...	Cum.	
Midt.	xwbs.	4	bc	2	30.048	40.0	38.0	84	40.0	8	...	Str.	
Totals.	...	82	bcqps	23	1287	29.3	201.6	22	10	145	Cir & Str.	Str. & Cum.	
Mean	w.N.W.	3		2	30.056	41.3	38.8	81	40.2	6			

## FRIDAY, 23D JANUARY 1874.

Hour.	Wind.		Weather	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	swbw.	4	bcy	...	30.014	40.3	37.8	81	...	3	...	Cum.	At Kerguelen, Temperature by self-registering thermo- meter, max. 46°, min. 39°.
2.	swbx.	5	bcy	...	29.966	40.8	38.8	84	40.0	8	...	Str.	
3.	N.	4	eq	...	29.895	40.8	38.8	84	...	10	...	Str.	
4.	swb.	6	eq	...	29.879	41.3	39.5	86	40.0	10	...	Str.	
5.	swb.	5	eqp	...	29.825	41.8	40.8	92	...	10	...	Cum str.	
6.	swb.	7	eqp	...	29.731	43.5	41.0	87	40.0	10	...	Cum.&Nb.	
7.	N.N.W.	7	eqp	3	29.691	42.8	41.8	92	...	10	...	Cum.&Nb.	
8.	N.N.W.	8	eqp	4	29.669	42.8	42.8	100	...	10	...	Cum.&Nb.	
9.	N.N.W.	9	orm	4	29.633	43.3	43.3	100	...	10	...	Str.	
10.	N.N.W.	7	odm	4	29.605	43.8	43.8	100	40.5	10	...	Str.	
11.	N.N.W.	8	odm	4	29.583	44.0	44.0	100	...	10	...	Str.	
Noon.	N.N.W.	9	orl	5	29.558	44.5	44.5	100	40.5	10	...	Str.	At sea off the N.E. coast of the island.
1.	N.N.W.	8	orm	4	29.532	44.8	44.8	100	40.8	10	...	Str.	
2.	N.N.W.	9	orm	5	29.529	45.3	45.3	100	40.8	10	...	Str.	
3.	N.N.W.	8	orm	4	29.478	45.3	45.3	100	...	10	...	Str.	
4.	N.N.W.	9	orm	5	29.441	45.8	45.8	100	40.8	10	...	Str.	
5.	N.N.W.	7	opr	...	29.439	45.8	45.8	100	...	10	...	Str.	
6.	N.N.W.	8	ogr	...	29.441	45.3	44.8	96	40.5	10	...	Nimb.	
7.	N.N.W.	7	opnd	...	29.425	44.8	44.8	100	...	10	...	Cum.&Nb.	
8.	N.N.W.	5	om	5	29.449	44.8	43.8	100	40.0	10	...	Cum.	
9.	N.W.	6	om	...	29.476	43.8	43.8	100	...	10	...	Str.	
10.	N.W.	5	om	4	29.481	43.0	43.0	100	39.0	10	...	Str.	
11.	N.W.	4	of	...	29.490	43.3	43.0	98	...	10	...	Str.	One or two stars seen through the mist dimly towards midnight.
Midt.	swbw.	3	om	4	29.491	43.0	42.8	98	39.0	10	...	Str.	
Totals.	...	158	eqpm	55	14721	84.7	70.9	2298	1.9	231	...	Str., Cum., & Nimb.	
Mean.	N.N.W.	7		4	29.613	43.5	42.9	96	40.1	9			

## SATURDAY, 24TH.

1.	wbs.	3	o	4	29.491	41.3	41.3	100	...	10	...	Str.	At Kerguelen. Temperature by self-registering thermo- meter, max. 44°, min. 40°.
2.	N.W.	3	o	3	29.496	41.3	41.3	100	38.7	10	...	Str.	
3.	swbx.	3	or	3	29.487	41.8	41.8	100	...	9	...	Str. cum.	
4.	swbx.	3	om	3	29.473	41.8	41.8	100	38.5	10	...	Str.	
5.	swbx.	3	om	3	29.470	41.8	41.8	100	...	10	...	Str.	
6.	swbx.	4	of	3	29.473	42.8	42.3	97	38.5	10	...	Cum str.	
7.	swbx.	3	of	3	29.472	42.8	42.8	100	...	10	...	Cum str.	
8.	swbx.	4	of	3	29.469	42.8	42.8	100	38.7	10	...	Cum str.	
9.	swbx.	3	of	3	29.470	42.8	42.8	100	...	10	...	Nimb.	
10.	swbx.	4	fg	3	29.432	42.8	42.8	100	39.0	10	...	Nimb.	
11.	swbx.	5	fg	3	29.440	42.8	42.8	100	...	10	...	Nimb.	
Noon.	swbx.	5	f	3	29.452	42.8	42.8	100	39.0	10	...	Nimb.	At 7.30 P.M. anchored in Cascade Reach.
1.	swbw.	5	orm	3	29.441	42.5	42.5	100	...	10	...	Str.	
2.	swbw.	5	ben	3	29.429	42.0	41.8	98	39.5	9	...	Cum str.	
3.	swbw.	6	ben	3	29.421	42.0	41.5	96	...	8	...	Cum str.	
4.	N.N.W.	3	be	3	29.434	41.8	41.0	94	40.5	6	...	Cir.	
5.	N.N.W.	4	bcy	...	29.431	42.8	41.8	92	...	...	...	Cum.	
6.	wbs.	5	be	...	29.428	42.3	41.3	92	...	...	...	Cum.	
7.	wbs.	4	be	...	...	...	...	...	...	6	...	Cir str.	
8.	swbw.	3	be	...	29.441	43.0	41.8	90	41.0	7	...	Cir str.	
9.	N.W.	4	be	...	29.430	42.8	41.3	88	...	6	...	Str.	
10.	swbx.	3	be	...	29.432	42.8	41.3	88	...	6	...	Str.	
11.	swbx.	5	be	...	29.432	42.3	41.8	96	...	5	...	Cum.	
Midt.	swbx.	3	be	...	29.419	42.3	41.8	96	...	3	...	Cum.	
Totals.	...	93	cfm	49	10363	54.2	45.0	2227	86.4	190	...	Cum., Cum str., & Nimb.	
Mean.	N.W.	4		3	29.451	42.4	41.9	97	39.6	8			

## SUNDAY, 25TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N. N. W.	6	bcq	...	29.392	42.8	41.8	92	7	...	Cum str.	At Kerguelen island.	
2.	NWbS.	2	bq-ol	...	29.378	42.8	41.8	92	8	...	Cum. str. & Nlb.	Temperature by self-registering thermo-	
3.	NWbS.	1	omr	...	29.316	42.8	42.5	98	10	...	Nimb.	meter, max. 51, min. 41°.	
4.	NWbS.	3	omd	...	29.294	43.8	43.8	100	10	...	Nimb.		
5.	...	...	o	...	29.288	44.3	44.0	98	10	Cir.	Cum. & Nlb.	6 A.M., left Cascade Reach, and anchored	
6.	NWbW.	5	bc	...	29.281	44.8	43.8	92	9	Cir. cum.	Cum. & Nlb.	in Betsy cove at 6 A.M.	
7.	NWbW.	5	bc	...	29.276	44.8	43.8	92	8	Cir cum.	Cum. & Nlb.		
8.	NWbW.	5	o	...	29.263	44.8	43.8	92	10	...	Str.		
9.	NWbW.	4	opp	...	29.248	44.8	44.3	96	10	...	Cum. & Nlb.		
10.	W. N. W.	8	bcq	...	29.250	47.8	44.8	79	4	...	Cum.		
11.	W. N. W.	4	bcq	...	29.260	48.0	44.3	75	6	...	Cum.		
Noon.	W. N. W.	7	bcqp	...	29.290	48.0	44.3	75	8	...	Str. & Cum.		
1.	WbS.	5	bcq	...	29.327	49.3	44.3	67	7	...	Cum.		
2.	WbS.	8	bcq	...	29.357	49.8	43.8	63	5	Cir.	Cum.		
3.	WbS.	5	bcq	...	29.383	48.8	42.8	62	5	Cir.	Cum.		
4.	WbS.	6	bcq	...	29.404	47.8	42.8	67	7	...	Cum. & Nlb.		
5.	W. N. W.	4	bc	...	29.416	46.3	43.5	81	8	...	Cum. & Str.		
6.	W. N. W.	6	bcqp	...	29.437	45.5	42.8	80	9	...	Cum. & Str.		
7.	W. N. W.	3	bcqp	...	29.487	43.3	41.3	84	8	...	Cum. & Nlb.		
8.	W. N. W.	6	bcq	...	29.498	42.8	40.3	81	9	...	Cum. & Nlb.		
9.	WbS.	3	bcq	...	29.525	41.3	38.3	77	7	...	Cum. & Nlb.		
10.	WbS.	5	bcq	...	29.557	41.8	37.8	72	8	...	Cum. & Nlb.		
11.	WbS.	3	bcqp	...	29.579	40.3	37.3	76	8	...	Cum. str. & Nlb.		
Midt.	W.	7	bcq	...	29.619	39.8	36.8	76	7	...	Cum str.		
Totals.	...	111	...	...	9125	116.3	54.8	1967	...	188	Cir.	Cum. & Nimb.	
Mean.	W. N. W.	5	bcqp	...	29.380	44.8	42.3	82	...	8			

## MONDAY, 26TH.

1.	w.	7	bcq	...	29.636	38.8	34.8	79	6	...	Cum.	At Kerguelen island.
2.	w.	5	bcq	...	29.665	40.3	37.3	76	6	...	Cum.	Temperature by self-registering thermo-
3.	w.	8	bcq	...	29.683	39.8	36.8	76	4	...	Cum.	meter, max. 47, min. 38° 5.
4.	w.	5	bcq	...	29.712	49.8	37.3	74	5	...	Cum. & Nlb.	
5.	wbS.	6	bcqp	...	29.722	39.8	37.0	77	7	Cir.	Cum str.	6 A.M., left Betsy cove, and anchored
6.	w.	5	bcq	2	29.734	40.5	37.5	76	8	Cir.	Cum str.	in Hopeful harbour at 5 P.M.
7.	w. N. W.	6	bc	2	29.752	41.5	39.8	87	4	Cir.	Cum.	
8.	w. N. W.	6	bc	...	29.792	42.8	40.0	79	41.0	7	Cir str.	Cum.
9.	w. N. W.	6	bc	...	29.791	41.8	39.8	85	6	...	Cum.	
10.	wbS.	6	bcq	...	29.791	41.8	39.8	85	8	Cir cum.	Cum & Str.	
11.	wbS.	6	bcq	...	29.798	42.5	39.8	80	5	Cir.	Cum & Str.	
Noon.	wbS.	4	bcq	...	29.799	43.3	40.3	78	6	Cir cum.	Cum & Str.	
1.	wbS.	5	bcq	...	29.811	43.5	39.8	73	7	Cir str.	Cum.	
2.	w. N. W.	4	bcq	...	29.806	43.8	40.8	77	41.0	8	Cir.	Cum & Str.
3.	w. N. W.	5	bcq	...	29.810	43.8	41.8	84	9	...	Cum str.	
4.	w. N. W.	4	bcq	...	29.771	44.8	40.8	72	40.8	8	Cum str.	
5.	wbS.	5	bcq	...	29.765	45.8	42.8	79	9	...	Cum.	
6.	wbS.	4	cp	...	29.753	45.8	42.3	76	10	...	Cum.	
7.	wbS.	4	ocm	...	29.731	44.8	41.8	78	10	...	Cum & Str.	
8.	wbS.	5	ocm	...	29.715	44.8	41.8	78	10	...	Cum & Str.	
9.	wbS.	3	ocm	...	29.705	42.8	39.8	78	10	...	Cum & Str.	
10.	wbS.	5	ocp	...	29.711	42.8	39.8	78	10	...	Cum & Str.	
11.	wbS.	2	bem	...	29.722	42.3	38.8	75	8	...	Cum & Str.	
Midt.	wbS.	3	bc	...	29.732	41.8	38.8	78	5	...	Cum.	
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Totals.		119		4	17907	60.5	229.3	189	2.8	176	Cir str. & Cir cum.	Str. & Cum.
Mean.	wbS.	5		2	29.746	42.5	39.6	78	40.9	7		

## TUESDAY, 27TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometric, corrected to 0° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
1.	w.b.s.	1	bc	...	29.765	41.3	37.8	74	...	7	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 44°, min. 39°.
2.	w.b.s.	2	bc	...	29.771	40.8	37.3	73	...	7	...	Cum.	
3.	w.b.s.	2	bc	...	29.772	40.8	37.3	73	...	4	...	Cum.	
4.	w.b.s.	3	bc	...	29.772	40.8	36.8	70	...	4	...	Cum str.	
5.	w.b.s.	2	c	...	29.788	39.8	37.8	84	...	10	Str.	Cum.	
6.	w.b.s.	1	c	...	29.793	41.8	37.8	72	...	9	...	Cum.	
7.	w.b.s.	2	c	...	29.800	41.8	39.8	85	...	8	...	Cum.	
8.	w.b.s.	3	bc	1	29.800	41.8	39.8	85	...	8	...	Cum.	
9.	swbw.	4	oc	...	29.786	42.8	40.8	84	...	9	...	Cum str.	
10.	swbw.	4	oc	1	29.789	43.0	41.3	86	41.7	10	...	Cum str.	
11.	swbw.	4	oc	...	29.786	42.0	40.5	88	...	9	...	Cum str.	
Noon.	swbw.	4	ocm	1	29.783	42.3	41.0	90	40.7	10	Cir.	Cum str.	5.30 A.M., left Hopeful harbour and anchored in Fuller's harbour at 6 P.M.
1.	swbw.	3	oc	1	29.781	42.8	41.3	88	40.7	10	...	Cm.&Str.	
2.	swbw.	3	oc	1	29.779	41.3	40.0	90	...	10	...	Cm.&Str.	
3.	swbw.	3	oc	...	29.775	41.8	39.8	85	40.0	10	...	Cm.&Str.	
4.	swbw.	3	oc	...	29.759	42.3	39.8	82	...	10	...	Cm.&Str.	
5.	w.b.s.	3	oc	...	29.725	43.5	40.0	75	...	10	...	Cm.&Str.	
6.	swbw.	2	oc	1	29.721	42.8	40.0	80	40.7	10	...	Cm.&Str.	
7.	w.b.s.	2	oc	...	29.718	42.8	40.8	84	...	10	...	Cum str.	
8.	swbs.	2	bc	...	29.714	42.3	39.3	78	...	6	Cir str.	Cum.	
9.	swbs.	1	bc	...	29.696	41.8	39.8	85	...	8	...	Cm.&Str.	
10.	Calm.	0	bc	...	29.699	41.3	39.8	88	...	9	Cir str.	Cum.	
11.	Calm.	0	bc	...	29.689	41.3	39.3	84	...	5	...	Str.	
Midt.	sbw.	1	bc	...	29.687	40.8	40.0	94	...	2	...	Str.	
Totals.	...	55	...	6	18148	43.8	47.9	1977	3.8	195	Cir str.	Cum. & Str.	
Mean.	w.b.s.	2	bc	1	29.756	41.8	39.5	82	40.7	8	...	...	

## WEDNESDAY, 28TH.

1.	sbw.	2	bc	...	29.691	39.8	38.3	88	...	4	Str.	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 46°, min. 36°.
2.	sbw.	2	bc	...	29.696	39.3	37.3	84	...	3	...	Cum.	
3.	sbw.	1	bc	...	29.706	38.3	36.3	83	...	3	...	Cum.	
4.	sbw.	1	bc	...	29.726	37.8	35.8	83	...	2	...	Cum.	
5.	w.s.w.	1	bc	...	29.753	37.8	34.8	75	...	3	...	Cum.	
6.	w.b.s.	3	bc	...	29.778	39.8	35.8	69	...	4	...	Cum.	
7.	w.b.s.	2	bc	...	29.785	39.8	35.8	69	...	4	...	Cum str.	
8.	w.b.s.	3	bc	...	29.816	41.3	37.8	74	...	5	...	Cum str.	
9.	w.b.s.	2	bc	...	29.811	41.8	38.8	78	...	7	...	Cum str.	
10.	w.b.s.	2	bc	...	29.811	43.3	40.8	81	...	7	...	Cum str.	
11.	w.b.s.	2	bc	...	29.818	43.8	40.8	77	...	6	...	Cum.	
Noon.	w.b.s.	2	bc	...	29.821	43.8	40.8	77	...	7	...	Cum.	In Fuller's harbour.
1.	w.b.s.	3	bc	...	29.844	44.0	40.8	76	...	7	...	Cum.	
2.	w.b.s.	2	bc	...	29.820	43.8	40.8	77	...	9	...	Cum.	
3.	w.b.s.	3	bc	...	29.802	44.8	41.8	78	...	8	Cir.	Cum.	
4.	w.b.s.	5	bc	...	29.799	44.8	41.5	76	...	6	...	Cum.	
5.	w.b.s.	3	oc	...	29.791	43.3	41.3	84	...	10	...	Cum.	
6.	w.b.s.	3	oc	...	29.787	42.8	40.8	84	...	10	...	Cm.&Str.	
7.	sbw.	3	od	...	29.758	42.3	39.8	82	...	10	...	Cum.	
8.	sbw.	2	ed	...	29.752	41.8	39.8	85	...	10	...	Cum.	
9.	sbw.	3	cr	...	29.751	41.3	40.8	96	...	10	...	Cum.	
10.	sbw.	2	cr	...	29.731	41.8	40.8	92	...	10	...	Cum.	
11.	sbw.	3	cr	...	29.725	41.3	40.8	96	...	10	...	Cum.	
Midt.	sbw.	3	ed	...	29.668	41.8	40.8	92	...	10	...	Cum.	
Totals.	...	58	...	...	18440	40.4	222.9	1956	...	165	Cir.	Cum. & Cum str.	
Mean.	w.b.s.	2	bc	...	29.768	41.7	39.3	81	...	7	...	...	

## THURSDAY, 29TH JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature, of Sea Surface, Sat. = 100.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	sw by s.	6	ocpq	...	29.648	42.5	41.8	94	...	10	Cum & N.b.		At Kerguelen island.
2.	s.w.	3	ocpq	...	29.633	42.3	41.3	92	...	10	Str. & N.b.		Temperature by self-registering thermo-
3.	sw by w.	7	ocpqm	...	29.616	42.0	41.5	96	...	10	Str. & N.b.		meter, max. 47°, min. 39° 5.
4.	w. s. w.	5	ocpqm	...	29.601	42.0	41.5	96	...	10	Str. cum.		Sudden and violent squalls in middle
5.	w. s. w.	6	bcpp	...	29.621	41.8	40.8	92	...	9	Cir cum. Cum & Str.		watch.
6.	w. s. w.	3	bc p	...	29.638	41.8	40.8	92	...	7	Cir cum. Cum str.		6 A.M., left Fuller's harbour for Christ-
7.	...	...	bc	...	29.670	42.3	39.8	82	...	6	...		mas harbour, where we arrived at
8.	...	...	bc	...	29.678	...	...	...	...	5	Cum.		5 P.M.
9.	w.	4	bc	...	29.711	41.3	38.8	81	...	6	Cum.		
10.	w.	4	bc	...	29.715	41.3	37.8	74	40.2	6	Cum.		
11.	w by s.	4	bc	...	29.743	42.8	39.8	76	...	7	Cum.		
Noon.	w by s.	3	bc	...	29.775	41.3	38.3	77	39.8	7	Cum.		
1.	w by s.	3	bc	...	29.783	40.3	38.8	88	...	6	Cum.		
2.	w by s.	4	bc pm	...	29.806	40.3	38.8	88	39.0	7	Str.		
3.	w by s.	2	bc	...	29.832	42.8	39.8	78	...	5	Str.		
4.	w by s.	...	bc	...	29.833	42.8	39.8	78	39.0	5	Cum.		
5.	w by s.	4	bc	...	29.837	44.8	41.5	76	...	3	Cum.		
6.	w by s.	3	bc	...	29.858	43.0	40.0	78	...	4	Cum.		
7.	w by s.	2	bc	...	29.897	41.3	37.8	74	...	1	Cir.		
8.	w by s.	1	bc	...	29.910	41.3	38.3	77	...	3	Cum & Cum st		
9.	w by s.	2	bc	...	29.934	41.3	36.3	64	...	5	Cum.		
10.	w. s. w.	1	bc	...	29.962	39.8	35.8	69	...	5	Cum.		
11.	w. s. w.	3	bc	...	29.973	39.8	34.8	63	...	5	Cir.		
Midt.	sw by s.	1	bc	...	29.984	39.8	34.8	63	...	3	Cum.		
Totals.	...	71	bcppm	...	18658	38.7	208.7	1850	20	145	Cir str.	Cum str. & Nimb.	
Mean.	w.	3		...	29.777	41.7	39.1	80	39.5	6			

## FRIDAY, 30TH.

1.	sw by s.	1	bc	...	29.997	39.0	34.8	69	...	3	Cum.		At Kerguelen island.
2.	sw by s.	1	bc	...	30.010	38.8	35.8	77	...	2	Cum.		Temperature by self-registering thermo-
3.	sw by s.	2	bc	...	30.019	38.3	35.8	80	...	2	Cum.		meter, max. 48°, min. 36°.
4.	sw by w.	1	bc	...	30.027	37.8	36.3	87	...	2	Cum.		
5.	Calm.	0	bc	...	30.060	38.0	36.8	89	...	2	Cum.		
6.	sw by s.	1	bc	...	30.063	38.8	38.3	96	...	2	Cum.		
7.	w by s.	1	bc	...	30.091	42.8	40.8	84	...	2	Cum.		
8.	w by s.	1	bc	...	30.095	46.0	43.3	82	...	2	Cum.		In Christmas harbour.
9.	w by s.	1	bc	...	30.108	45.8	42.8	79	...	3	Cum.		
10.	w by s.	2	bc	...	30.108	45.3	42.3	78	...	4	Cum.		
11.	w by s.	1	bc	...	30.104	47.3	42.8	71	...	3	Cum.		
Noon.	w by s.	2	bc	...	30.100	46.8	43.8	79	...	4	Cum.		Clouds very low.
1.	sw by w.	2	bc	...	30.098	47.3	43.3	73	...	4	Cir.		
2.	sw by w.	3	bc	...	30.092	45.8	42.8	79	...	7	Cum.		
3.	sw by w.	2	bc	...	30.076	45.3	42.3	78	...	8	Cum.		
4.	sw by w.	2	bc	...	30.060	44.0	42.3	86	...	9	Cum & Cum st		
5.	sw by w.	2	bc	...	30.036	43.3	41.8	88	...	9	Cum.		
6.	w by s.	3	c	...	30.034	43.3	41.3	84	...	10	Cum.		
7.	w by s.	3	om	...	30.029	42.8	41.8	92	...	10	Cum.		
8.	w by s.	3	o	...	30.002	41.8	40.8	92	...	10	Cum.		Thick mist low down.
9.	w by s.	2	o	...	29.992	42.8	41.8	92	...	10	Cum.		
10.	w by s.	2	or	...	29.972	42.3	41.8	96	...	10	Cum.		
11.	w by s.	3	or	...	29.969	42.3	41.8	96	...	10	Cum.		
Midt.	w by s.	4	or	...	29.956	42.3	42.3	100	...	10	Cum.		
Totals.	...	45	bc p	...	1098	68.0	17.7	2027	...	138	Cir.	Cum.	
Mean.	w by s.	2		...	30.046	42.8	40.7	84	...	6			

SATURDAY, 31st JANUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	w <sup>b</sup> s.	3	or	...	29.946	42.3	42.3	100	...	10	...	Cum.	At Kerguelen island. Temperature by self-registering thermo- meter, max. 45°, min. 41°.
2.	w <sup>b</sup> s.	4	or	...	29.927	42.8	42.3	96	...	10	...	Cum.	
3.	w. N. w.	3	or	...	29.906	42.8	42.8	100	...	10	...	Cum.	
4.	w. N. w.	5	or	...	29.888	43.8	43.8	100	...	10	...	Cum.	
5.	w. N. w.	3	ou	...	29.884	42.8	42.8	100	...	10	...	Cum.	
6.	w. N. w.	5	ou	...	29.886	43.8	43.3	96	...	10	...	Cum.	
7.	w <sup>b</sup> s.	3	cu	...	29.883	43.8	43.8	100	...	9	...	Cum.	
8.	w <sup>b</sup> s.	4	cu	...	29.878	43.8	43.3	96	...	10	...	Cum.	
9.	w <sup>b</sup> s.	3	bcu	...	29.889	43.5	43.3	98	...	7	...	Cum str.	
10.	w <sup>b</sup> s.	5	...	...	29.926	42.8	41.8	92	...	...	...	...	
11.	w <sup>b</sup> s.	3	...	...	29.929	43.3	41.5	86	...	...	...	...	
Noon.	w <sup>b</sup> s.	6	bcu	...	29.946	43.8	41.8	84	...	8	...	Cum.	3 p.m., left Christmas harbour, Ker- guelen island, for Royal sound.
1.	w <sup>b</sup> s.	3	eq	...	29.970	43.3	41.3	84	...	10	...	Cum.	
2.	w <sup>b</sup> s.	6	bcu	...	29.975	44.3	42.0	82	...	9	...	Cum.	
3.	w <sup>b</sup> s.	3	bcu	...	29.974	44.8	42.3	82	...	8	...	Cum.	
4.	w <sup>b</sup> s.	6	bcu	...	29.979	43.3	41.8	88	...	6	...	Cum.	
5.	w.	4	bc	...	29.987	42.8	40.3	81	...	8	...	Cum.	
6.	w.	3	bc	...	29.990	42.3	40.8	88	40.0	9	...	Cum.	
7.	w.	4	c	...	29.991	42.3	40.8	88	...	10	...	Cum.	
8.	w.	3	bc	...	30.000	42.3	40.3	85	40.0	8	...	Cum.	
9.	w. N. w.	4	bc	...	29.993	42.3	41.0	90	...	8	...	Cum str.	
10.	w. N. w.	3	bcu	...	29.991	42.5	41.0	89	40.5	8	...	Str.	
11.	w. N. w.	6	eq	...	29.987	42.5	41.3	90	...	9	...	Cum.	
Midt.	w <sup>b</sup> s.	4	eq	...	29.987	42.0	41.3	94	40.5	10	...	Str.	
Totals.	...	96	...	...	22712	74.0	47.0	29	10	197	...	Cum. & Str.	
Mean.	w <sup>b</sup> s.	4	bcu	...	29.946	43.0	41.9	91	40.2	9	...	Cum. & Str.	

SUNDAY, 1st FEBRUARY.

1.	w.	4	eq	...	29.988	42.3	41.3	92	...	10	...	Cm.&Str.	At Kerguelen. Temperature by self-registering thermo- meter, max. 51°5', min. 40°5'.
2.	w.	5	bcu	...	29.981	42.3	41.8	96	40.5	8	...	Cir.	
3.	sw <sup>b</sup> w.	4	bcu	...	29.967	42.3	41.3	92	...	10	...	Cir cum.	
4.	sw <sup>b</sup> w.	6	bcu	...	29.976	42.3	41.3	92	...	7	...	Cir cum.	
5.	sw <sup>b</sup> w.	4	bc	...	29.979	42.3	40.8	89	...	8	...	Cir str.	
6.	w <sup>b</sup> s.	4	bc	...	29.978	42.7	41.0	86	40.5	8	...	Cm.&Str.	
7.	w <sup>b</sup> s.	3	bc	...	29.965	43.8	41.8	84	...	8	...	Cir str.	
8.	w.	2	bc	...	29.965	44.3	42.3	84	41.0	7	...	Cir str.	
9.	w.	5	bc	...	29.965	44.3	42.8	89	...	7	...	Cir.	
10.	w.	4	bc	...	29.961	44.3	42.8	89	41.0	6	...	Cir.	
11.	Variable.	1	bc	...	29.936	45.8	43.8	86	...	8	...	Cir.	
Noon.	w <sup>b</sup> s.	3	bc	...	29.929	47.8	43.8	73	41.0	8	...	Cir.	At noon, off Royal sound.
1.	sw <sup>b</sup> w.	5	bc	...	29.929	48.5	45.0	76	...	7	...	Cir str.	
2.	sw <sup>b</sup> w.	4	bc	...	29.916	44.8	42.8	85	41.0	9	...	Cir str.	
3.	sw <sup>b</sup> w.	5	bc	...	29.914	43.0	41.8	90	...	8	...	Cir str.	
4.	sw <sup>b</sup> w.	3	bc	...	29.914	42.5	41.3	90	40.5	8	...	Cir str.	
5.	sw <sup>b</sup> w.	2	bc	...	29.906	42.8	41.3	88	...	9	...	Cir str.	
6.	sw <sup>b</sup> w.	4	bc	...	29.903	42.3	41.0	90	29.2	8	...	Cir cum.	
7.	w <sup>b</sup> s.	2	bc	...	29.899	41.8	...	38.5	9	...	...	Cm.&Str.	
8.	w <sup>b</sup> s.	3	bc	...	29.887	41.8	39.8	85	38.5	8	...	Cm.&Str.	
9.	w <sup>b</sup> s.	2	oc	...	29.873	42.0	40.8	90	...	9	...	Str.	
10.	w.	3	oc	1	29.856	42.5	40.5	85	38.5	10	...	Str.	
11.	w <sup>b</sup> s.	4	o	1	29.832	42.5	40.5	85	...	10	...	Str.	
Midt.	w.	5	c	1	29.829	42.8	41.5	90	38.2	10	...	Cum.	
Totals.	...	87	...	3	22248	81.8	41.1	206	118.4	200	...	Cm.&Str., & Cum str.	
Mean.	w.	4	bc	1	29.927	43.4	41.8	87	39.9	8	...	Cum str.	

## MONDAY, 2d FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 30 in. and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	w.	6	eq	2	29.823	43.3	41.8	84	...	9	...	Cum.	At noon, lat. 52° 4' s. long. 71° 22' E. Temperature by self-registering thermo- meter, max. 44° 5, min. 40°. Current, s. 81° E. 13 miles.
2.	w.	7	eq	...	29.785	42.8	41.3	88	38.5	8	...	Cum.	
3.	w.	6	bcq	...	29.763	42.8	41.3	88	...	5	Cir.	Cum.	
4.	wb'x.	7	bc	...	29.753	42.8	41.8	92	38.5	4	...	Cum.	
5.	wb'x.	6	bc	3	29.740	41.8	40.8	92	...	5	...	Cum. & Str.	
6.	xwb'w.	7	...	...	29.739	41.8	41.3	96	38.0	...	Cir str.	...	
7.	xwb'w.	6	bc	...	29.736	41.8	41.8	100	...	6	Cir str.	...	
8.	xwb'w.	6	bc	...	29.735	41.8	40.8	92	37.5	...	...	...	
9.	xwb'w.	6	bc	...	29.707	41.3	40.8	96	...	6	Cir.	Cum.	
10.	xwb'w.	6	bc	...	29.682	41.8	40.8	92	37.5	3	Cir.	Str.	
11.	xwb'w.	6	bc	4	29.675	41.3	40.5	94	...	6	...	Str. cum.	
Noon.	xwb'x.	7	cm	...	29.670	41.5	40.8	94	37.0	9	...	...	Birds seen during the day were alba- tross, stormy petrel, Cape pigeons, tern, and prion. Sp. gr. 1-92515.
1.	xwb'x.	5	ofu	...	29.658	41.3	41.0	98	...	10	...	Str.	
2.	xwb'x.	7	ofu	...	29.630	41.3	41.3	100	37.5	10	...	Str.	
3.	xwb'x.	5	om	...	29.626	41.3	41.3	100	...	10	...	Cum.	
4.	xwb'x.	7	of	...	29.597	41.3	41.3	100	37.5	10	...	Cum.	
5.	xwb'x.	5	f	...	29.581	41.3	41.0	98	...	10	...	Str.	
6.	xwb'x.	6	f	...	29.578	41.3	41.3	100	37.5	10	...	Str.	
7.	xwb'x.	5	f	3	29.573	40.8	40.5	98	...	10	...	Str.	
8.	xwb'x.	4	f	4	29.550	40.3	40.3	100	37.2	10	...	Str.	
9.	xwb'x.	3	...	...	29.553	41.3	40.8	96	...	10	...	Str.	
10.	N. w.	3	om	3	29.551	40.8	40.8	100	...	10	...	Str.	
11.	N. w.	5	...	...	29.543	40.8	40.8	100	...	10	...	Str.	Sea slightly phosphorescent.
Midt.	N. w.	3	f	3	29.539	40.8	40.3	96	...	10	...	Str.	
Totals.	...	134	bc & of.	24	157.87	37.9	24.5	2294	67	181	Cir str.	Cum. & Str.	
Mean.	xwb'w.	6	...	3	29.658	41.6	41.0	96	37.7	8	...	...	

## TUESDAY, 3d.

1.	N. w.	2	f	...	29.505	39.8	39.8	100	...	10	...	Str.	At noon, lat. 52° 20' s. long. 72° 14' E. Temperature by self-registering thermo- meter, max. 41°, min. 38°. Current, s. 26° w. 5.
2.	xwb'w.	1	f	...	29.507	39.8	39.3	96	37.0	10	...	Str.	
3.	xwb'w.	2	f	...	29.500	39.8	39.3	96	...	10	...	Str.	
4.	xwb'w.	2	of	...	29.504	39.8	39.8	100	37.0	10	...	Str.	
5.	w. s. w.	2	om	...	29.487	39.0	39.0	100	...	10	...	Str. cum.	
6.	w. s. w.	2	bcm	...	29.487	38.8	38.8	100	...	6	...	Str. cum.	
7.	w. s. w.	2	bc	...	29.507	38.8	38.8	100	...	6	...	Str. cum.	
8.	w. s. w.	1	cm	...	29.529	39.0	39.0	100	...	10	...	Str.	
9.	w. s. w.	1	cm	...	29.539	39.3	39.3	100	...	10	...	Str.	
10.	s'w.	1	cm	...	29.535	39.5	39.5	100	38.0	10	...	Str.	
11.	s'w.	1	cm	...	29.537	40.0	39.5	96	...	10	...	Str. & Cumst.	Birds seen during the day were alba- tross, Cape pigeons, stormy petrel, tern, prion, and a few penguins.  In the afternoon a few porpoises were seen. Sp. gr. 1-92522.
Noon.	s'w.	1	cm	...	29.535	40.8	40.0	94	38.0	10	...	Str. & Cumst.	
1.	s'w.	1	f	...	29.543	40.3	39.8	96	...	10	...	Str.	
2.	Vbl.	1	fd	...	29.544	39.8	39.8	100	37.7	10	...	Str.	
3.	s. s. e.	2	fd	...	29.576	39.0	38.8	98	...	10	...	Str.	
4.	s'w.	2	fd	...	29.569	39.0	38.8	98	37.7	10	...	Str.	
5.	s'w.	2	odm	...	29.550	39.5	39.5	100	...	10	...	Str.	
6.	s. e.	3	odm	...	29.559	39.3	39.0	98	37.5	10	...	Str.	
7.	s'w.	4	od	...	29.543	37.8	37.3	96	...	10	...	Str.	
8.	s'w.	3	odm	...	29.532	36.8	36.8	100	...	10	...	Nimb.	
9.	s. e. s.	2	odm	...	29.538	38.8	38.3	96	...	10	...	Nimb.	
10.	s'w.	3	odm	...	29.541	37.8	37.8	100	37.5	10	...	Nimb.	
11.	s'w.	3	odm	...	29.533	37.8	37.8	100	...	10	...	Nimb.	
Midt.	s'w.	2	odm	...	29.546	37.8	37.8	100	37.5	10	...	Nimb.	
Totals.	...	46	odmf	...	127.37	218.1	213.6	2364	67.9	232	...	Str. & Nimb.	
Mean.	Variable.	2	...	...	29.531	39.1	38.9	98	37.5	10	...	...	

## WEDNESDAY, 4TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	SE by E.	2	orm	...	29.520	38.3	37.0	89	...	10	...	Str.	At noon, lat. 52° 29' S. long. 71° 36' E. Temperature by self-registering thermometer, max. 40°, min. 36°. Current, N. 26° W. 4'.
2.	E. S. E.	4	orm	...	29.520	37.5	36.8	94	37.2	10	...	Str.	
3.	E. S. E.	3	orm	...	29.480	36.8	36.8	100	...	10	...	Str.	
4.	E. S. E.	4	orm	...	29.501	37.5	37.0	96	37.2	10	...	Str.	
5.	E. by S.	3	orm	...	29.504	37.3	36.8	96	...	9	...	Str.	
6.	E. by S.	4	o	...	29.508	37.3	36.8	96	37.0	10	...	Str.	Birds seen during the day were albatross, petrel, prion, lestris, Cape pigeon, tern, sheath bills, and penguins. Sp. gr. 1-02497.
7.	E. by S.	3	orm	...	29.511	36.8	36.8	100	...	10	...	Str.	
8.	E. by S.	4	od	...	29.553	36.8	36.3	96	...	10	...	Str.	
9.	SE by S.	3	od	...	29.560	37.3	36.8	96	...	10	...	Str.	
10.	S. S. E.	4	cm	...	29.565	37.3	37.0	98	37.2	9	Str.	Cum.	
11.	SE by S.	4	be	...	29.598	37.8	37.3	96	...	8	Str.	Cum.	
Noon.	SE by S.	4	be	...	29.637	37.8	37.8	100	37.2	8	Str.	Cum.	
1.	S. E.	4	be	...	29.639	38.3	37.5	94	...	9	Cir.	Cum.	
2.	S. E.	4	be	...	29.631	38.5	37.8	94	37.0	9	...	Cum.	
3.	S. S. E.	3	oc	...	29.687	38.3	37.3	94	...	8	...	Cum.	
4.	S. S. E.	3	be	...	29.701	38.0	37.0	91	37.0	8	...	Cum.	
5.	...	...	be	...	29.727	38.3	37.0	89	...	5	Cir str.	Cum. & Str.	
6.	S. E.	1	be	...	29.717	37.3	36.3	91	...	4	Cir.	Cum.	
7.	SE by E.	2	be	...	29.750	36.8	35.8	91	...	6	...	St. & Cum.	
8.	SE by E.	2	be	...	29.764	37.3	36.3	91	37.0	7	...	St. & Cum.	
9.	E. S. E.	2	be	...	29.761	36.8	35.8	91	...	9	...	Cum.	
10.	E. by S.	3	be	...	29.756	36.5	35.5	91	37.0	7	...	Cum.	
11.	E. by S.	3	be	...	29.756	36.3	35.5	93	...	7	...	Cum.	
Midt.	E. by S.	4	c	2	29.754	35.3	34.8	96	37.0	9	...	St. & Cum.	
Totals.	...	73	orm & be	...	15120	176.2	159.8	100	8	201			
Mean.	SE by E.	3		2	29.630	37.3	36.7	94	37.1	8	Cir str.	Str. & Cum.	

## THURSDAY, 5TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	E.	4	c	1	29.750	35.8	35.3	96	...	8	...	Cum.	At noon, lat. 53° 23' S. long. 72° 24' E. Temperature by self-registering thermometer, max. 38°, min. 34°. Current, W 13'.
2.	E.	5	be	...	29.747	35.8	35.3	96	37.0	7	...	Cum.	
3.	E. S. E.	5	...	...	29.745	35.8	35.3	96	...	7	...	...	
4.	E. S. E.	6	c	1	29.655	36.3	35.8	96	...	8	...	Cum str.	
5.	E. by N.	5	c	...	29.667	36.3	35.8	96	...	9	...	Cum str.	
6.	E.	5	o	...	29.677	36.3	35.8	96	37.0	10	...	Cum str.	Birds seen during the day were albatross, tern, sheath bills, and penguins. Observed two whales at 2 P.M. Sp. gr. 1-02498.
7.	E.	5	odm	...	29.675	36.3	35.8	96	...	10	...	Cum str.	
8.	E.	6	oqur	...	29.665	36.3	36.0	97	36.7	10	...	Nimb.	
9.	E. by N.	5	odm	...	29.636	36.5	36.3	98	...	10	...	Cum str.	
10.	E. by N.	6	odm	...	29.597	36.3	36.0	97	37.0	10	...	Cum str.	
11.	E. S. E.	6	odm	2	29.572	36.0	36.0	100	...	10	...	Str.	
Noon.	E. S. E.	7	ormq	2	29.560	36.8	36.8	100	37.0	10	...	Str.	
1.	E. S. E.	5	odm	...	29.552	37.3	37.3	100	...	10	...	Cum.	
2.	E. S. E.	4	odm	...	29.520	37.8	37.3	96	...	10	...	Cum.	
3.	E. S. E.	2	orm	...	29.501	37.3	37.3	100	...	10	...	Cum.	
4.	E. by N.	4	odm	...	29.502	37.5	37.3	98	...	10	...	Cum.	
5.	SE by N.	2	ofd	...	29.436	37.8	37.8	100	...	10	...	Nimb.	
6.	SE by N.	1	orf	...	29.419	37.3	36.8	96	36.7	10	...	Nimb.	
7.	S. by W.	1	orm	...	29.406	36.8	36.8	100	...	10	...	Str.	
8.	V. by E.	1	odm	...	29.392	38.8	38.0	94	36.7	10	...	Str.	
9.	...	2	odm	...	29.385	37.3	36.8	96	...	10	...	Str.	
10.	...	3	ed	...	29.385	36.8	36.8	100	...	10	...	Str.	
11.	sw by S.	4	beq	...	29.387	36.3	35.8	96	...	7	...	Str.	
Midt.	sw by S.	6	eq	...	29.412	35.8	35.8	100	...	9	...	Cum str.	
Totals.	...	100	cmfl	6	13243	161.3	154.0	180	48.1	225	...	Cum., Str., & Cum str.	
Mean.	E. by N.	4		1	29.552	36.7	36.4	97	36.9	9	...		

## FRIDAY, 6TH FEBRUARY 1874.

Hour	Wind.		Weather	State of Sea, 0 to 9	Barometer re- duced to 32 and Sea-Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper	Lower.	
1.	s.s.w.	6	eq	3	29.446	35.8	35.8	100	...	8	...	...	At noon, lat. 53° 10' s. long. 72° 49' E. Temperature by self-registering thermo- meter, max. 39°, min. 34° 5. Cnm.&Nb. Current, w. 13'. Cnm.&Nb. Cnm.&Nb. Cnm.&Nb. Cnm. Cnm.&Nb. Cnm.&Nb. Cnm. Cnm. Cnm.
2.	s.s.w.	7	eq	3	29.420	36.3	35.8	96	36.7	6	...	...	
3.	s.w.b.	8	eq	3	29.425	36.3	35.8	96	...	7	...	...	
4.	s.w.b.	6	eq	3	29.455	35.8	34.8	91	36.7	8	...	...	
5.	s.w.b.	7	eq	4	29.465	35.8	34.8	91	...	8	...	...	
6.	s.w.b.	8	eq	4	29.467	36.3	35.5	93	36.5	9	...	...	
7.	s.w.b.	7	eq	4	29.470	36.0	35.5	96	...	9	...	...	
8.	w.b.	8	eqs	5	29.500	36.8	36.0	93	36.5	9	...	...	
9.	s.w.b.	7	...	...	...	...	...	...	...	...	...	...	
10.	s.w.b.	8	beq	...	29.515	36.3	35.8	96	36.0	8	...	...	
11.	s.w.b.	7	eq	...	29.533	36.8	35.3	87	...	9	...	...	
Noon.	s.w.b.	8	eq	...	29.545	37.8	36.3	87	36.0	10	...	...	
1.	w.b.	7	eq	5	29.560	37.8	36.8	91	...	9	...	...	3 P.M., under the lee of Heard island.
2.	w.b.	8	eq	5	29.577	37.8	36.8	91	36.7	9	...	...	
3.	w.b.	9	eq	3	29.598	38.3	36.8	87	...	8	...	...	
4.	w.b.	6	eq	2	29.622	38.0	37.0	91	37.0	8	...	...	
5.	w.b.	7	eq	...	29.633	38.0	37.0	91	...	10	...	...	4 P.M., anchored in Corinthian bay, Heard island. Str. Cum str. Cnm.&Str. Cum str. Cnm.&Nb. Cnm.&Nb. Cnm.&Nb. Cnm.&Nb.
6.	w.s.w.	6	eq	...	29.639	37.5	36.3	89	...	10	...	...	
7.	w.s.w.	7	eq	...	29.642	37.3	35.8	87	...	9	...	...	
8.	w.s.w.	5	eq	...	29.625	36.8	34.8	83	...	10	...	...	
9.	s.w.	7	eq	...	29.617	36.8	34.8	83	...	9	...	...	
10.	s.w.	6	eq	...	29.632	36.5	35.5	91	37.2	9	...	...	
11.	s.w.	6	eq	...	29.604	36.5	34.5	82	...	8	...	...	
Midt.	s.w.	3	eq	...	29.602	36.8	34.8	83	37.0	8	...	...	
Totals.	...	164	...	44	12571	158.1	132.3	2075	66.3	198	...	...	Cnm. & Nimb.
Mean.	s.w.b.	7	eqs	4	29.568	36.6	35.8	90	36.6	9	...	...	

## SATURDAY, 7TH.

1.	s.w.	3	o	...	29.564	36.8	34.8	83	...	10	...	...	At noon, lat. 53° 3 s. long. 73° 11' E. Temperature by self-registering thermo- meter, max. 39°, min. 32° 5. Cnm. Str. Str. Str. 5 A.M., left Corinthian bay. Str. Nimb. Nimb. Nimb. Birds seen during the day were Cape pigeons, penguins, prion, puffinaria, and a large black petrel. Sp. gr. 1.02519.
2.	s.w.b.	2	om	...	29.533	35.5	34.8	93	37.7	10	...	...	
3.	s.w.b.	1	om	...	29.481	34.3	33.8	95	...	10	...	...	
4.	Calm.	0	oms	...	29.430	34.3	33.5	92	34.7	10	...	...	
5.	E.S.	1	oms	...	29.387	33.8	33.8	100	...	10	...	...	
6.	E.S.	1	oms	...	29.348	35.3	34.3	90	...	10	...	...	
7.	E.S.	1	or	...	29.277	34.8	34.8	100	...	10	...	...	
8.	E.S.	2	odm	2	29.232	35.3	35.3	100	...	10	...	...	
9.	E.S.	1	odl	2	29.158	37.3	37.3	100	...	10	...	...	
10.	Vide.	1	or	2	29.127	36.8	36.3	96	36.2	10	...	...	
11.	Vide.	0	od	2	29.105	37.8	37.8	100	36.2	10	...	...	
Noon.	s.w.b.	3	odl	2	29.071	38.8	38.3	96	...	10	...	...	Str. Str.&Cnm. Str.&Cnm. Str.&Cnm. Cnm. Cnm. Str.&Cnm. Str.&Cnm. Cnm. Cnm.
1.	w.s.w.	4	odm	3	29.046	38.5	38.5	100	37.0	10	...	...	
2.	w.b.	7	...	3	...	...	...	...	...	...	...	...	
3.	w.b.	8	omp	3	29.040	38.3	37.8	96	36.5	10	...	...	
4.	w.b.	9	omp	3	29.040	38.0	37.5	96	...	10	...	...	
5.	w.b.	8	beq	4	29.039	37.0	36.3	94	...	7	...	...	
6.	w.s.w.	8	beq	4	29.043	36.8	35.3	96	...	7	...	...	
7.	w.s.w.	7	eq	4	29.040	37.3	36.3	91	35.5	8	...	...	
8.	w.s.w.	8	beq	4	29.061	36.8	35.8	91	...	6	...	...	
9.	w.s.w.	9	beq	5	29.034	36.8	35.5	89	35.5	8	...	...	
10.	w.s.w.	8	beq	5	29.034	36.8	35.3	87	...	8	...	...	
11.	w.s.w.	9	beq	5	29.005	36.8	35.8	91	...	6	...	...	
Midt.	w.s.w.	10	beq	6	29.004	36.8	35.5	89	35.5	5	...	...	
Totals.	...	111	oms & beq	59	4069	150.7	134.4	95	54.8	205	...	...	Str., Nimb, & Cnm.
Mean.	Variable.	5	...	4	29.178	36.6	35.8	94	36.1	9	...	...	

## SUNDAY, 8TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.		10	bcq	...	28.990	36.3	34.8	87	...	8	...	Cum.	At noon, lat. 55° 28' s. long. 74° 37' E. Temperature by self-registering thermo- meter, max. 39°, min. 34°. Current, S. 53° E. 19'.
2.	w.s.	8	bcq	...	29.017	36.3	34.8	87	35.2	8	...	Cum.	
3.	w.s.	10	bcq	...	29.032	36.3	35.0	89	...	6	...	Cum.	
4.	w.s.	7	oq	6	29.053	36.0	35.3	94	35.0	9	...	Cm. & Nb.	
5.	w.s.	9	oq	6	29.113	36.3	35.8	96	...	10	...	Cm. & Str.	
6.	w.s.	7	bcq	6	29.125	36.0	35.3	94	35.0	8	...	Cum.	
7.	w.s.	8	bcq	6	29.125	36.3	35.5	93	...	6	...	Cir cum.	
8.	w.s.	5	bc	6	29.144	36.8	35.8	91	35.5	5	...	Cum. & Str.	
9.	w.s.	6	bc	6	29.136	36.8	35.8	91	...	5	...	Cir cum.	
10.	w.s.	6	bc	6	29.134	36.8	35.8	91	...	4	...	Cir cum.	
11.	w.s.	6	bc	4	29.132	37.0	36.0	91	...	6	...	Cum.	Birds seen during the day were Cape pigeons, prion, stormy petrel, pen- guins, and lestris. In the evening three large black birds, and one with black and white breast were seen. Sp. gr. 1.02510.
Noon.	w.s.s.	6	bcq	4	29.121	36.8	36.0	93	35.0	7	...	Cir cum.	
1.	w.s.s.	5	bc	...	29.131	37.3	36.3	91	...	6	...	Str. cum.	
2.	w.s.s.	5	bc	...	29.130	37.3	37.0	98	35.0	4	...	Cm. & Str.	
3.	w.s.s.	5	bc	...	29.127	37.3	36.8	87	...	6	...	Cm. & Str.	
4.	w.s.s.	5	bc	...	29.122	37.5	36.0	87	34.7	5	...	Cum str.	
5.	w.s.	5	bc	4	29.117	36.5	34.8	85	...	6	...	Cum.	
6.	w.s.s.	5	bc	3	29.095	36.0	34.3	84	34.2	5	...	Cm. & Nb.	
7.	w.s.s.	5	bc	3	29.096	35.8	34.5	89	...	7	...	Cum.	
8.	w.s.s.	6	bc	3	29.085	35.0	34.8	98	34.0	6	...	Cum.	
9.	w.s.	6	bc	3	29.075	34.3	34.3	100	...	8	...	Cum.	
10.	w.s.	6	bc	...	29.064	34.3	34.3	100	34.0	7	...	Cum.	Midt.
11.	w.s.	6	c	...	29.065	34.5	34.5	100	...	10	...	Cum.	
Midt.	w.s.	5	c	...	29.063	35.3	34.8	95	34.0	9	...	Cum.	
Totals.	...	152	bcq	66	2292	149.8	128.3	2211	51.6	161	Cir cum.	Cum. & Str.	
Mean.	w.s.	6		5	29.095	36.2	35.3	92	34.7	7			

## MONDAY, 9TH.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	w.s.w.	5	bc	3	29.065	34.3	33.8	95	...	7	Cir.	Cum.	At noon, lat. 58° 7' s. long. 75° 57' E. Temperature by self-registering thermo- meter, max. 37° 5', min. 31° 7'. Current, S. 63° E. 23'. 1.30 A.M., brilliant streaks of aurora to s.w., rising to an altitude of 15° to 45°.
2.	w.	3	bc	3	29.059	33.8	32.8	89	34.0	3	...	Cir cum.	
3.	w.	5	cq	3	29.029	34.3	33.3	90	...	7	...	Cm. & Nb.	
4.	w.	5	c	2	29.023	34.8	33.8	90	34.0	8	...	Cum.	
5.	w.	5	bcq	3	29.005	34.8	34.0	92	...	7	...	Cum.	
6.	w.	3	bc	2	28.995	34.5	33.8	93	33.7	8	...	Cm. & Nb.	
7.	w.	4	bc	...	28.989	34.5	33.8	93	...	9	...	Rel. cum.	
8.	w.	3	bc	...	28.991	34.8	34.0	92	33.7	9	...	Cum.	
9.	w.	4	bc	...	28.987	35.0	34.3	93	...	7	...	Cm. & Cum.	
10.	w.	3	os	...	28.985	34.8	34.0	92	34.0	10	...	Cm. & Nb.	
11.	w.	3	c	...	28.987	34.3	34.0	97	...	10	...	Cm. & Cum.	Observed a whale in the forenoon.  Birds seen during the day were Cape pigeons, sooty albatross, lestris, tern, stormy petrel, and prion. Sp. gr. 1.02508.
Noon.	w.	3	bc	...	28.984	35.5	34.8	92	34.0	7	...	Cm. & Cum.	
1.	w.s.	3	bc	3	28.996	36.8	35.8	91	...	6	...	Cum str.	
2.	w.s.	3	bc	3	29.001	36.8	35.8	91	34.6	6	Cir str.	...	
3.	w.s.	4	bc	2	29.007	35.3	34.3	90	...	7	Cir cum.	...	
4.	w.s.w.	3	bc	2	29.012	35.8	34.8	91	34.0	4	Cir str.	...	
5.	w.s.w.	3	bc	...	29.020	35.5	34.8	93	...	3	Cir str.	...	
6.	s.w.	4	cqs	2	29.013	34.8	33.3	85	34.0	10	...	Cum str.	
7.	s.w.	5	bc	...	29.038	33.5	32.5	89	...	9	...	Cum str.	
8.	s.w.	4	c	...	29.033	34.3	32.8	84	...	10	Cir cum.	Cm. & Cum.	
9.	s.w.	5	cq	2	29.046	33.8	33.0	91	...	8	...	Cm. & Nb.	
10.	swbw.	5	c	2	29.043	33.8	32.8	89	34.0	7	...	Cm. & Nb.	Midt.
11.	swbw.	7	cqs	3	29.046	33.8	33.0	91	...	7	Cir.	Cm. & Nb.	
Midt.	swbw.	6	cq	3	29.047	34.8	32.8	80	34.0	8	Cir.	Cm. & Nb.	
Totals.	...	98	bcqsp	38	401	114.4	92.1	13	43.4	177	Cir str.	Cum. & Nimb.	
Mean.	w.s.	4		3	29.017	34.8	33.8	91	33.9	7			

## TUESDAY, 10TH FEBRUARY 1874

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32 and Sea Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	W.S.W.	7	bc	3	29.046	33.8	32.5	86	...	6	...	Cum.	At noon, lat. 60° 2' S. long. 77° 20' E. Temperature by self-registering thermometer, max. 34° 2, min. 31° 7.
2.	W.S.W.	6	bc	4	29.053	33.8	32.5	86	34.0	8	...	Cum.	
3.	W.S.W.	7	bc	4	29.038	33.3	32.3	89	...	10	...	Cum.	
4.	W.S.W.	6	bc	4	29.035	33.5	32.3	86	33.7	10	...	Cum.	Current, S. 57° E. 11'.
5.	W.S.W.	7	bepps	4	29.023	32.8	32.3	94	...	7	...	Cum.	
6.	W.S.W.	6	bc	...	29.022	32.8	32.5	96	33.7	8	...	Cum.	
7.	W.S.W.	6	eps	...	29.023	32.8	32.8	100	...	9	...	Cum.	Occasional showers of snow.
8.	W.S.W.	5	eps	...	29.035	33.5	32.8	92	...	10	...	Cum. & Nb.	
9.	swbW.	5	cs	...	29.033	34.3	33.3	89	...	9	...	Cum.	
10.	swbW.	6	eq	...	29.034	34.3	33.8	95	33.7	8	...	Cum str.	Birds seen during the day were albatross, prion, Cape pigeon, Icterus, and night hawks.
11.	swbW.	5	eq	...	29.035	34.3	33.8	95	...	9	...	Cum.	
1.	S.W.	5	bc	...	29.041	33.8	33.3	95	...	9	...	Cum.	
2.	S.W.	6	bc	4	29.026	33.8	33.5	97	34.0	10	...	Cum.	Swell from the S.W.
3.	S.W.	7	eps	...	29.010	33.8	33.5	97	...	9	...	Cum.	
4.	S.W.	6	bepps	...	29.010	34.0	34.0	100	34.0	8	...	Cum str.	
5.	S.W.	6	bepps	...	29.014	33.8	33.8	100	...	8	...	Cum.	...
6.	S.S.W.	4	e	...	29.035	34.3	33.8	95	34.0	8	...	Cum.	
7.	S.	3	e	...	29.056	33.8	33.8	100	...	8	...	Cum.	
8.	S.	2	e	...	29.069	33.8	33.8	100	33.7	9	...	Cum str.	...
9.	sbW.	3	e	...	29.096	35.3	34.5	92	...	8	...	Cum str.	
10.	S.	2	bc	...	29.129	34.0	33.8	98	33.7	9	...	Cum str.	
11.	sbW.	4	bc	12	29.132	34.0	33.8	98	...	8	...	Cum str.	...
Midt.	S.	3	e	...	29.184	34.5	34.3	98	33.5	10	...	Cum.	
Totals.	...	123	bepps	25	121.8	91.9	79.8	109	41.7	206	...	Cir.	
Mean.	S.W.	5		4	29.051	33.8	33.3	95	33.8	9	...	Cum. & Cum str.	

## WEDNESDAY, 11th.

1.	S.S.W.	3	o	...	29.214	34.3	33.8	95	...	10	...	Cum.	At noon, lat. 60° 52' S. long. 80° 20' E. Temperature by self-registering thermometer, max. 37°, min. 32° 7.
2.	S.S.W.	4	bep	...	29.244	33.8	33.3	95	34.0	9	...	Cum str.	
3.	...	...	bc	...	29.245	33.8	33.3	95	...	7	...	...	
4.	...	...	eps	...	29.291	33.8	32.8	89	34.0	...	...	Cum.	Current, N. 62° E 22'. 2.50 A.M., observed a tabular iceberg.
5.	sbW.	3	eps	...	29.350	33.8	33.8	100	...	8	...	Cum str.	
6.	S.S.W.	2	e	...	29.372	34.8	33.8	90	34.0	9	...	Cum.	
7.	S.S.W.	2	e	...	29.369	34.3	34.0	97	...	9	...	Cum str.	Birds seen during the day were albatross, Cape pigeons, prion, stormy petrel, Icterus, black night hawks, and one snow bird.
8.	S.W.	2	eps	...	29.414	35.0	34.5	95	34.2	9	...	Cum.	
9.	S.W.	2	e	...	29.430	35.0	34.0	90	...	9	...	Cum str.	
10.	S.W.	1	e	...	29.454	35.3	34.3	90	34.5	9	...	Cum str.	Sp. gr. 1.02515. Ice in sight.
11.	N.W.	2	e	...	29.469	36.0	35.0	91	...	10	...	Cum str.	
Noon.	S.W.	1	e	...	29.486	36.3	35.0	89	34.5	10	...	Cum str.	
1.	WbS.	2	e	...	29.512	36.3	34.8	87	...	10	...	Cum str.	...
2.	WbS.	2	e	...	29.540	36.3	34.8	86	34.2	10	...	Cum str.	
3.	WbS.	2	e	...	29.541	35.3	34.0	87	...	10	...	Cum str.	
4.	WbS.	2	e	...	29.553	34.3	33.3	89	34.2	10	...	Cum str.	...
5.	WbS.	2	e	...	29.564	34.0	32.8	87	...	10	...	Cum str.	
6.	W.	2	e	...	29.568	33.8	32.8	89	34.0	10	...	Cum.	
7.	W.	2	e	1	29.586	33.8	33.5	80	...	10	...	Cum str.	...
8.	W.	3	e	...	29.587	34.5	32.3	78	34.0	9	...	Cum str.	
9.	W.	2	e	...	29.574	33.8	33.3	95	...	10	...	Cum str.	
10.	W.S.W.	3	e	...	29.546	33.8	33.3	95	34.2	10	...	Cum str.	...
11.	W.S.W.	4	e	1	29.538	33.8	33.3	95	...	10	...	Cum str.	
Midt.	swbW.	3	e	...	29.524	33.8	33.3	95	34.2	10	...	Cum str.	
Totals.	...	53	eps	-	108.73	111.7	89.1	19	20	218	...	Cum. & Cum str.	
Mean.	W.S.W.	2		1	29.457	34.7	33.7	91	34.2	9	...		

## THURSDAY, 12TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometric Pressure, to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N <sup>3</sup> W.	3	os	2	29.507	33.3	33.0	97	...	10	...	Nimb.	At noon, lat. 62° 36' s. long. 80° 20' E. Temperature by self-registering thermo- meter, max. 35° 7', min. 32°.
2.	N <sup>3</sup> W.	4	o	2	29.457	33.8	33.3	95	34.2	10	...	Nimb.	
3.	N <sup>3</sup> W.	5	omq	2	29.453	33.8	33.3	95	34.2	10	...	Nimb.	
4.	N <sup>3</sup> W <sup>1</sup> W.	4	omq	4	29.427	34.8	34.3	95	34.2	10	...	Nimb.	Current, s. 45° w. 6'.
5.	N <sup>3</sup> W <sup>1</sup> W.	5	osm	...	29.396	34.5	34.5	100	...	10	...	Str.	
6.	N <sup>3</sup> W <sup>1</sup> W.	4	oms	...	29.384	35.0	35.0	100	34.2	10	...	Str.	
7.	W <sup>3</sup> N <sup>3</sup> N.	5	oms	3	29.362	34.8	34.3	95	...	10	...	Str.	Birds seen during the day were Cape pigeons, night hawks, tern, and albatross.
8.	W <sup>3</sup> N <sup>3</sup> N.	4	oms	3	29.348	35.0	34.8	98	34.2	10	...	Str.	
9.	W <sup>3</sup> N <sup>3</sup> N.	5	oms	...	29.345	34.8	34.8	100	...	10	...	Str.	
10.	...	...	e	...	29.329	34.8	34.8	100	34.0	10	...	Str.	Sp. gr. 1.02489. Some whales seen during the day.
11.	...	...	cm	...	29.321	35.0	35.0	100	...	10	...	Str.	
Noon.	NNW <sup>1</sup> W.	4	cm	2	29.295	35.3	35.3	100	34.0	10	...	Str.	
1.	N <sup>3</sup> W.	3	om	2	29.266	35.3	34.8	95	...	10	...	Nimb.	Icebergs in sight all day. Sea a dirty green colour.
2.	N <sup>3</sup> E.	3	om	2	29.242	35.3	35.3	100	34.5	10	...	Nimb.	
3.	N <sup>3</sup> E.	3	f	2	29.190	34.8	34.8	100	...	10	...	Str.	
4.	N <sup>3</sup> E <sup>1</sup> E.	4	om	2	29.174	34.8	34.8	100	34.0	10	...	Nimb.	Sea a dirty green colour.
5.	N <sup>3</sup> N.	4	odm	...	29.167	34.8	34.8	100	...	10	...	Str.	
6.	E <sup>3</sup> N <sup>3</sup> N.	5	odm	...	29.050	34.8	34.8	100	34.0	10	...	Str.	
7.	N <sup>3</sup> E.	5	odm	...	29.010	35.3	34.8	95	...	10	...	Str.	Nimb.
8.	N <sup>3</sup> E.	4	or	...	28.964	35.3	35.0	97	34.0	10	...	Nimb.	
9.	N <sup>3</sup> E.	4	or	...	28.910	34.8	34.8	100	...	10	...	Nimb.	
10.	N <sup>3</sup> E.	5	or	...	28.898	35.3	35.3	100	34.2	10	...	Nimb.	Nimb.
11.	N <sup>3</sup> W <sup>1</sup> W.	6	or	...	28.884	35.8	35.8	100	...	10	...	Nimb.	
Midt.	N <sup>3</sup> W <sup>1</sup> W.	6	or	...	28.862	34.8	34.8	100	34.2	10	...	Nimb.	
Totals.	...	93	om-pr	29	5181	116.0	112.2	202	17	...	...	Str. & Nimb.	
Mean.	N <sup>3</sup> W.	4		2	29.216	34.8	34.7	98	34.1	10			

## FRIDAY, 13TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometric Pressure, to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N <sup>3</sup> W.	4	odm	2	28.771	34.8	34.8	100	...	10	...	Cum str.	At noon, lat. 64° 38' s. long. 80° 0' E. Temperature by self-registering thermo- meter, max. 36°, min. 32°.
2.	N <sup>3</sup> W.	4	odm	2	28.798	34.8	34.8	100	34.0	10	...	Cum str.	
3.	N <sup>3</sup> W.	3	odm	2	28.808	35.0	34.3	93	...	10	...	Cum str.	
4.	N <sup>3</sup> W.	4	ocm	2	28.815	35.8	34.5	89	33.7	10	...	Cum.	Current, s. 45° w. 6'.
5.	N <sup>3</sup> W.	5	oms	2	28.820	35.8	33.8	100	...	8	...	Cum str.	
6.	N <sup>3</sup> W.	4	om	...	28.804	33.8	33.5	97	33.7	10	...	Cum.	
7.	N <sup>3</sup> W.	4	om	...	28.806	33.8	33.5	97	...	10	...	Cum.	Birds seen during the day were sooty albatross, Cape pigeons, prion, night hawks, stormy petrels, and carrion gulls.
8.	N <sup>3</sup> W.	4	om	...	28.803	33.8	33.5	97	33.0	10	...	Cum.	
9.	N <sup>3</sup> W.	4	o	2	28.817	33.8	32.8	89	...	10	...	Cum.	
10.	N <sup>3</sup> W.	4	o	2	28.818	33.8	32.8	89	33.2	10	...	Cum.	Sea an olive green. One or two whales seen. Icebergs in sight all day. Sp. gr. 1.02487.
11.	N <sup>3</sup> W.	4	bes	2	28.786	33.5	32.8	93	...	8	...	Cum.	
Noon.	N <sup>3</sup> W.	3	be	2	28.796	34.0	33.8	98	33.2	8	...	Cum.	
1.	N <sup>3</sup> W.	4	be	...	28.789	34.3	33.8	95	...	9	...	Cum.	Large bergs ahead. Hauled to wind.
2.	N <sup>3</sup> W.	3	be	...	28.777	35.5	34.8	93	33.5	7	...	Cir cum.	
3.	N.N.W.	4	os	3	28.769	34.8	34.3	95	...	9	...	Cum.	
4.	N.N.W.	3	e	...	28.768	34.8	34.0	92	33.5	10	...	Cum str.	11.15, ran into some brash ice, with large bergs ahead.
5.	N.	4	e	3	28.761	32.8	32.3	94	...	10	...	Cum str.	
6.	N.	4	es	4	28.753	34.8	33.8	90	...	9	...	Cum.	
7.	N.	3	hem	4	28.759	34.3	33.8	95	...	8	...	Cir cum.	Hauled to wind.
8.	N.	3	e	4	28.753	34.0	33.8	98	32.7	9	...	Cum.	
9.	N.	3	ocsm	...	28.737	33.3	33.0	97	...	10	...	Cum str.	
10.	N.N.W.	3	ocsm	...	28.743	33.0	32.8	98	30.0	10	...	Cum.	Cum. & Cum str.
11.	N <sup>3</sup> W.	3	hem	3	28.742	32.5	32.0	94	...	8	...	Cir cum.	
Midt.	N <sup>3</sup> W.	3	hem	...	28.761	31.8	31.8	100	29.5	4	...	Cum.	
Totals.	...	83	be-m	38	18754	96.6	85.1	123	39.0	217	...		
Mean.	N.N.W.	4		3	28.781	34.0	33.5	95	32.7	9			

## SATURDAY, 14TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N.W.	2	bc	...	28.759	32.3	32.3	100	30.5	4	...	Cm.&Str.	At noon, lat. 65° 42' s, long. 79° 49' E. Temperature by self-registering thermo- meter, max. 34°, min. 30°.5.
2.	N.W.	3	bc	...	28.780	32.8	32.8	100	31.5	6	...	Cm.&Str.	
3.	N.W.	4	cps	...	28.779	33.3	33.3	100	31.0	9	...	Cm.&Str.	
4.	N.	1	cps	...	28.775	33.3	33.3	100	31.2	10	...	Cm.&Str.	Current, s. 18° w. 3'.
5.	N.	3	cps	...	28.782	32.8	32.3	94	31.2	9	...	Cum.	
6.	N.E.N.	1	bcs	...	28.775	31.8	31.8	100	30.0	8	Str.	Cum.	
7.	N.E.N.	2	cps	...	28.769	32.8	32.0	91	29.8	8	...	Cum.	Birds seen during the day were Cape pigeons, snow birds, penguins, and several kinds of small petrels.
8.	N.E.E.	2	cps	...	28.779	31.8	31.8	100	29.8	8	...	Cum.	
9.	N.E.N.	3	bc	...	28.763	31.8	31.8	100	29.8	8	...	Cm.&Str.	
10.	N.E.N.	3	bc	...	28.770	32.8	32.5	96	...	6	...	Cm.&Str.	Pack ice and numerous bergs in sight all day. Sp. gr. 1.02419.
11.	N.E.N.	3	bc	...	28.767	32.8	32.5	96	...	9	...	Cum.	
Noon.	N.E.N.	2	c	...	28.763	33.0	32.5	94	...	9	...	Cum.	
1.	E.N.	1	c	...	28.766	33.3	32.8	95	30.0	9	...	Cum.	Sp. gr. 1.02419.
2.	E.N.	1	cps	...	28.770	32.8	32.5	96	30.0	9	...	Cum.	
3.	E.N.	1	bc	...	28.747	33.8	32.8	89	30.0	10	Str.	Cum.	
4.	E.	1	c	...	28.767	33.0	32.8	98	30.0	9	...	Cum.	Sp. gr. 1.02419.
5.	S.E.E.	2	c	...	28.769	33.0	32.8	98	30.0	10	...	Cm.&Str.	
6.	S.E.N.	1	c	...	28.772	32.8	31.8	89	30.5	10	...	Cm.&Str.	
7.	E.N.	1	c	...	28.751	33.3	32.5	91	30.7	8	...	Cum.	Sp. gr. 1.02419.
8.	E.N.	2	c	...	28.751	32.3	32.0	97	30.7	9	...	Cm.&Str.	
9.	E.N.	1	c	...	28.751	31.5	31.0	93	29.7	9	...	Cm.&Str.	
10.	E.N.	2	c	...	28.748	31.5	31.2	97	30.0	9	...	Cm.&Str.	Sp. gr. 1.02419.
11.	E.N.	1	beps	...	28.749	31.3	31.0	97	30.0	9	...	Cm.&Str.	
Midt.	E.N.	1	cms	...	28.764	30.8	30.8	100	30.0	10	...	Cm.&Str.	
Totals.	...	42	...	...	1548	60.7	52.9	151	216.4	198	...	...	Sp. gr. 1.02419.
Mean.	N.E.E.	2	beps	...	28.765	32.5	32.2	96	30.3	8	...	...	

## SUNDAY, 15TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	E.N.	1	csm	1	28.780	31.3	30.8	94	30.0	10	...	Cm.&Str.	At noon, lat. 65° 59' s, long. 78° 24' E. Temperature by self-registering thermo- meter, max. 30.5, min. 27°.
2.	E.N.	1	cpsm	1	28.783	30.8	30.3	91	30.0	8	...	Cum.	
3.	E.	2	cpsm	1	28.779	30.8	30.3	91	30.1	10	...	Cum.	
4.	E.N.	2	c	1	28.780	30.3	29.8	92	30.0	9	...	Cum.	Current, s. 74° w. 15'.
5.	S.S.E.	2	c	...	28.781	29.8	28.8	83	30.0	10	...	Cm.&Str.	
6.	S.E.N.	1	bc	...	28.785	29.3	29.3	100	29.5	10	...	Cum.	
7.	S.E.N.	1	cf	...	28.764	29.8	29.5	94	29.5	10	...	Cum.	Birds seen during the day were sooty albatross, Cape pigeons, snow birds, black and white petrel, and penguins.
8.	S.E.N.	1	c	...	28.801	30.0	29.5	91	29.5	10	...	Cm. str.	
9.	...	...	c	...	28.822	29.8	29.8	100	29.7	10	...	Cm.&Str.	
10.	...	...	c	...	28.824	29.8	29.8	100	30.0	10	...	Cm.&Str.	A few whales seen during the day.
11.	...	...	c	...	28.819	29.8	29.3	91	31.5	10	...	Cm.&Str.	
Noon.	...	...	c	...	28.826	28.8	28.5	94	31.5	10	...	Cm.&Str.	
1.	S.E.N.	1	c	...	28.831	28.8	28.3	91	31.2	10	...	Cm.&Str.	Pack ice and bergs in sight all day. Sp. gr. 1.02485.
2.	S.E.N.	2	c	...	28.835	28.8	28.3	91	31.0	9	...	Cm.&Str.	
3.	S.E.E.	2	c	...	28.841	29.3	28.8	91	32.5	10	...	Cm.&Str.	
4.	S.E.L.	3	c	...	28.853	28.5	28.0	89	32.5	10	...	Cm.&Str.	Sp. gr. 1.02485.
5.	S.	1	c	...	28.859	28.5	27.8	86	30.7	9	...	Str.	
6.	S.E.E.	2	c	1	28.856	28.5	27.8	86	32.7	10	...	Str.	
7.	S.E.E.	2	c	...	28.878	28.3	27.8	91	31.0	9	...	Cm.&Cm str	Sp. gr. 1.02485.
8.	S.E.E.	2	c	...	28.877	27.3	27.0	94	31.0	9	...	Cm.&Cm str	
9.	S.S.W.	1	bc	...	28.870	27.0	26.8	96	30.5	8	...	Cm.&N.b.	
10.	S.W.N.	2	c	...	28.870	27.0	26.3	86	30.5	9	...	Cm.&N.b.	Sp. gr. 1.02485.
11.	W.S.W.	2	c	...	28.867	27.8	26.3	71	30.5	9	...	Cm.&N.b.	
Midt.	W.S.W.	2	c	...	28.869	27.8	26.5	75	30.5	9	...	Cum.	
Total.	...	33	...	5	19850	217.9	205.4	2165	15.9	288	...	...	Sp. gr. 1.02485.
Mean.	S.S.E.	2	cpsm	1	28.827	29.1	28.6	90	30.7	9	...	...	

## MONDAY, 16TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	w.b.s.	2	e	...	28.858	28.3	26.8	71	30.0	9	...	Cum.	At noon, lat. 66° 29' s. long. 78° 0' E. Temperature by self-registering thermo- meter, max. 31°, min. 26° 2. Current, N. 25° W. 7.
2.	w.b.s.	2	e	...	28.854	28.3	27.5	84	30.0	9	...	Cum.	
3.	W.N.W.	2	e	...	28.839	28.8	28.3	91	30.0	9	...	Cm.&Str.	
4.	W.N.W.	2	e	...	28.844	28.5	27.8	87	30.0	9	...	Cm.&Str.	
5.	...	...	...	...	28.854	28.8	28.3	91	...	9	...	Cm.&Rem Cum.	
6.	w.b.s.	1	he	...	28.845	29.3	28.8	91	31.0	9	...	Cum.	Birds seen during the day were Cape pigeons, snow birds, prion, sooty albatross, penguins, and puffinaria. Numerous bergs and some pack ice seen.
7.	xw.b.w.	1	he	...	28.843	29.3	28.5	86	31.2	8	...	Cum.	
8.	xw.b.w.	1	he	...	28.839	29.3	28.8	91	...	9	...	Cm.&Str.	
9.	Caln.	0	hev	1	28.830	29.8	29.3	91	30.5	8	...	Cm.&Str.	
10.	se.b.e.	1	hev	1	28.813	29.8	29.3	91	30.5	9	...	Cm.&Str.	
11.	E.b.s.	2	ev	1	28.810	29.8	29.5	94	30.5	10	...	Cm.&Str.	Whales and grampus round the ship in the afternoon. Sp. gr. 1.02439.
Noon.	E.b.s.	2	he	...	28.809	29.8	29.3	91	30.7	8	...	Cm.&Str.	
1.	E.b.s.	2	he	...	28.798	28.8	28.3	91	30.7	8	...	Cm.&Str.	
2.	E.b.s.	2	he	...	28.798	28.8	28.3	91	30.5	8	...	Cm.&Str.	
3.	E.N.E.	3	he	...	28.792	28.5	28.0	91	29.7	8	...	Cm.&Str.	
4.	E.N.E.	3	he	...	28.783	28.3	28.0	95	29.7	8	...	Cum.	Cir. Cir str.
5.	...	...	he	...	28.780	28.3	28.3	100	30.5	4	...	Cum.	
6.	E.	4	he	...	28.750	28.8	28.8	100	30.5	6	...	Cir str.	
7.	E.b.s.	4	he	...	28.746	28.8	28.3	91	31.5	9	...	Cm.&Str.	
8.	E.b.s.	4	r	...	28.727	28.8	28.3	91	31.5	9	...	Cm.&Str.	
9.	F.	5	onsp	...	28.709	28.8	28.5	96	30.0	9	...	Cm.&Str.	Cum. Str. Str.
10.	E.	4	oe	...	28.687	28.8	28.8	100	30.0	9	...	Cum.	
11.	E.b.s.	5	osm	2	28.656	29.8	29.8	100	30.5	10	...	Str.	
Midt.	E.b.s.	6	oms	...	28.646	29.5	29.5	100	30.5	10	...	Str.	
Totals.	...	61	hev & onsp	6	18910	215.8	205.1	2205	10.0	296	Cir str.		Cum. & Str.
Mean.	Variable.	3		1	28.788	29.0	28.5	92	30.5	9			

## TUESDAY, 17TH.

1.	E.b.s.	5	cm	...	28.648	29.8	29.8	100	30.0	10	...	Str.	At noon, lat. 65° 5' s. long. 78° 55' E. Temperature by self-registering thermo- meter, max. 33°, min. 27°. Current, N. 25° W. 6°.
2.	E.	6	c	2	28.653	29.5	29.5	100	30.2	10	...	Str.	
3.	E.	5	cms	3	28.633	29.5	29.5	100	30.2	10	...	Str.	
4.	E.	5	c	3	28.629	29.8	29.8	100	30.5	8	...	Str.	
5.	E.b.s.	4	c	3	28.616	31.8	31.8	100	32.2	10	...	Cum.	
6.	E.b.s.	5	cm	...	28.611	31.8	31.8	100	33.0	10	...	Cum.	Birds seen during the day were albat- ross, Cape pigeons, snow birds, prion, stormy petrel, tern, and lestris.
7.	E.b.s.	4	bcm	3	28.627	31.8	31.8	100	33.5	8	...	Cum.	
8.	E.b.s.	4	bcm	3	28.619	32.8	32.8	100	33.5	8	...	Cum.	
9.	E.b.s.	5	osm	3	28.627	32.0	33.0	100	33.2	10	...	Str.	
10.	E.S.E.	6	osm	3	28.601	32.0	32.0	100	33.2	10	...	Cm.&Str.	
11.	E.S.E.	5	bems	3	28.602	31.8	31.8	100	33.2	8	...	Cm.&Str.	A few whales seen during the day.] Sea an olive green.
Noon.	se.b.e.	6	oqu	3	28.599	31.0	31.0	100	33.2	9	...	Cm.&Str.	
1.	S.E.	4	c	...	28.600	30.3	30.1	97	34.0	10	...	Cm.&Str.	
2.	E.S.E.	4	c	...	28.627	29.5	29.3	96	33.0	10	...	Cm.&Str.	
3.	se.b.s.	6	c	...	28.624	29.3	28.8	91	33.0	10	...	Cm.&Str.	
4.	se.b.s.	4	c	12	28.642	28.8	28.6	96	33.0	10	...	Cm.&Str.	Only two bergs and no pack ice seen. Sp. gr. 1.02491.
5.	se.b.e.	5	c	12	28.650	28.0	27.8	95	33.0	10	...	Cm.&Str.	
6.	se.b.e.	5	c	12	28.656	27.8	27.8	100	32.7	10	...	Cm.&Str.	
7.	se.b.e.	5	oms	...	28.668	27.8	27.8	100	32.7	10	...	Cm.&Str.	
8.	S.	5	osm	...	28.673	27.8	27.8	100	32.7	10	...	Str.	
9.	S.	5	o	...	28.671	28.0	28.0	100	32.2	10	...	Str.	Cum. & Str.
10.	S.	5	o	...	28.680	27.8	27.8	100	32.5	10	...	Str.	
11.	S.	5	o	...	28.684	27.8	27.3	89	32.0	10	...	Str.	
Midt.	S.	5	o	...	28.691	27.3	26.8	89	32.5	10	...	Str.	
Totals.	...	118	...	35	15331	233.8	232.5	2373	59.2	231	Cum. & Str.		
Mean.	S.E.	5	onsp	3	28.639	29.7	29.7	98	32.5	10			

## WEDNESDAY, 18TH FEBRUARY 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	s.b.w.	4	e	2	28.704	26.8	26.5	93	32.7	10	...	Cum.	At noon, lat. 64° 44' s. long. 83° 26' E. Temperature by self-registering thermometer, max. 26°, min. 22°. Current, N. 19° W. 19'.
2.	s.b.w.	5	e	2	28.709	26.8	26.5	93	33.0	10	...	Cum.	
3.	s.b.w.	5	es	2	28.710	26.0	25.8	95	33.2	10	...	Cum.	
4.	s.b.w.	5	e	2	28.720	25.8	25.8	100	33.3	10	...	Cum.	
5.	s.b.w.	5	e	2	28.746	25.0	24.8	94	32.3	10	...	Str.	
6.	s.b.w.	5	e	2	28.749	24.8	24.5	91	32.3	10	...	Str.	
7.	s.b.w.	5	e	2	28.756	24.0	23.8	94	31.7	10	...	Str.	
8.	s.	4	bc	...	28.753	23.3	22.8	87	...	9	...	Str.	
9.	s.w.b.s.	4	e	...	28.775	23.8	22.3	63	28.0	10	...	Str.	
10.	s.w.b.s.	4	e	...	28.784	24.3	23.8	87	29.0	9	...	Str.	
11.	s.w.	4	e	...	28.795	24.3	23.8	87	29.0	8	...	Str.	
Noon.	s.w.	4	e	...	28.806	25.0	24.3	81	29.0	9	...	Str.	Pack ice and several bergs seen during the day. Sp. gr. 1.02418.
1.	s.b.w.	4	e	...	28.805	25.8	24.8	76	28.3	8	...	Cm.&Str.	
2.	s.b.w.	5	eq	...	28.816	24.5	23.8	81	27.7	8	...	Cm.&Str.	
3.	s.s.w.	4	eq	...	28.834	23.8	23.3	85	27.0	9	...	Cm.&Str.	
4.	s.s.w.	5	eq	...	28.844	23.8	23.5	91	27.0	9	...	Cm.&Str.	
5.	s.s.w.	5	o	2	28.864	25.0	24.5	86	31.2	10	...	Str.	
6.	s.w.b.s.	4	o	...	28.855	25.8	25.3	87	32.0	10	...	Str.	
7.	s.w.b.s.	3	cm	...	28.866	26.3	26.0	94	32.0	10	...	Str.	
8.	s.w.b.s.	4	eps	...	28.862	27.5	27.3	96	32.0	10	...	Str.	
9.	s.e.	2	o	2	28.859	27.8	27.8	100	32.0	10	...	Nimb.	
10.	eps.	1	os	2	28.871	27.8	27.8	100	32.0	10	...	Nimb.	
11.	w.b.s.	2	os	2	28.876	27.8	27.8	100	32.0	10	...	Nimb.	
Midt.	w.b.s.	4	os	2	28.879	27.5	27.0	100	32.0	10	...	Nimb.	
Totals.	...	97	...	20	19238	133.3	123.6	2161	18.3	229	...	Cum., Str., & Nimb.	
Mean.	s.s.w.	4	epsq	2	28.801	25.6	25.1	90	30.8	9	...		

## THURSDAY, 19TH.

1.	w.s.w.	2	om	...	28.880	27.0	26.8	95	33.2	10	...	Str.	At noon, lat. 64° 37' s. long. 85° 49' w. Temperature by self-registering thermometer, max. 32° 5', min. 27° 2'. Current, N. 51° E. 15'.
2.	w.s.w.	3	om	...	28.868	27.3	27.3	100	32.5	10	...	Str.	
3.	w.s.w.	2	cm	...	28.857	26.8	26.3	93	32.5	10	...	Str.	
4.	w.s.w.	1	e	...	28.852	26.5	26.3	96	32.5	10	...	Str.	
5.	w.b.s.	1	e	...	28.831	27.3	27.3	100	32.0	10	...	Str.	
6.	Calm.	0	bc	...	28.800	28.8	26.8	67	32.0	8	Cir.	Cm.&Nb.	
7.	Calm.	0	bc	...	28.753	27.8	27.0	84	32.0	8	...	Cum.	
8.	Calm.	0	bc	...	28.716	28.8	27.3	74	32.0	8	...	Cum.	
9.	E.N.E.	2	bc	...	28.722	29.3	27.8	76	32.0	9	...	Cm.&Str.	
10.	E.N.E.	4	e	...	28.699	29.3	27.8	76	32.0	8	...	Cm.&Str.	
11.	E.N.E.	3	bc	...	28.676	30.8	29.3	78	32.2	8	Cir.	Cum.	
Noon.	E.N.E.	4	bc	...	28.676	31.0	28.8	70	32.5	7	Cir.	Cm.&Str.	Several bergs seen, but no pack ice. Sp. gr. 1.02462.
1.	E.	5	bc	...	28.656	30.3	28.3	71	33.0	8	Cir.	Cum.	
2.	E.	5	bc	...	28.650	29.8	28.0	72	32.0	9	...	Cum.	
3.	E.	5	bc	...	28.628	29.8	27.8	69	32.0	9	...	Cum.	
4.	E.b.s.	5	bc	...	28.605	29.3	27.8	75	32.0	9	...	Cum.	
5.	E.b.s.	5	bc	...	28.596	28.8	27.3	74	...	9	...	Cum.	
6.	E.	4	bc	1	28.565	29.5	27.8	73	...	9	...	Cm.&Nb.	
7.	E.	4	bc	2	28.557	29.0	27.8	79	32.7	7	Cir.	Cm.&Nb.	
8.	E.	5	bc	2	28.554	29.3	28.0	79	32.5	8	...	Cum.	
9.	E.b.s.	6	o	2	28.534	30.0	28.5	76	33.0	10	...	Str.	
10.	E.b.s.	6	osm	2	28.520	29.0	28.5	91	33.2	10	...	Str.	
11.	E.b.s.	6	omq	3	28.512	29.8	29.0	86	...	10	...	Str.	
Midt.	E.N.E.	7	omqs	3	28.515	29.5	28.8	88	33.2	10	...	Cm.&Str.	
Totals.	...	85	bc & osm	15	15549	214.8	186.6	1942	51.0	214	...	Cum., Str., & Nimb.	
Mean.	Variable.	4	...	2	28.676	28.9	27.8	81	32.4	9	...		

## FRIDAY, 20TH FEBRUARY 1874.

Hour.	Wind.		Weather	State of Sea, 0 to 9.	Barometre, reduced to 32° and Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	SE by E.	5	oc	...	28.533	29.5	28.8	88	33.5	10	...	Cum str.	At noon, lat. 63° 49' S. long. 87° 24' E. Temperature by self-registering thermo- meter, max. 30° 7', min. 28° 0'. Current, S. 33' W. 14'.
2.	SE by E.	6	oc	...	28.558	29.5	28.8	88	33.5	10	...	Cum str.	
3.	SE by E.	5	cm	...	28.556	30.0	29.3	88	33.5	10	...	Cum str.	
4.	S. E.	6	cm	...	28.575	29.5	29.3	97	33.2	10	...	Cum str.	
5.	SE by S.	5	cm	...	28.594	29.3	28.8	92	33.2	10	...	Cum.	
6.	SE by S.	4	om	...	28.628	30.3	29.8	92	32.5	10	...	Cum.	
7.	SE by S.	5	om	...	28.651	30.0	28.8	97	32.0	10	...	Cum.	
8.	SE by S.	4	om	...	28.650	30.3	29.8	92	31.7	10	...	Cum.	
9.	SE by E.	5	om	...	28.677	30.3	29.8	92	31.7	10	...	Cum.	
10.	SE by E.	4	oc	...	28.696	30.3	29.8	92	32.0	10	...	Cm. & Str.	
11.	S. E.	4	oc	...	28.706	30.3	29.3	84	32.7	10	...	Cm. & Str.	
Noon.	S. E.	3	oc	...	28.724	30.0	29.3	88	32.7	10	...	Str.	Heard the call of penguins.  Numerous icebergs seen. Sp. gr. 1.02488
1.	S. E.	3	oc	...	28.737	30.0	29.3	88	32.5	8	...	Cm. & Str.	
2.	SE by S.	4	oc	...	28.740	29.8	29.5	91	32.5	8	...	Cm. & Str.	
3.	SE by S.	4	oc	...	28.774	29.5	28.8	88	32.7	9	...	Cm. & Str.	
4.	S. S. E.	4	oc	...	28.789	29.5	28.8	88	32.7	10	...	Cm. & Str.	
5.	S. E.	3	c	...	28.795	29.3	28.5	86	32.5	10	...	Cm. & Str.	
6.	S. E.	3	c	...	28.803	28.8	28.3	91	32.5	10	...	Cm. & Str.	
7.	S. S. E.	3	oc	...	28.825	28.8	28.3	91	32.7	10	...	Cm. & Str.	
8.	S. S. E.	3	oc	...	28.820	28.5	28.0	91	32.7	10	...	Cm. & Str.	
9.	S. S. E.	2	oc	...	28.828	28.3	28.3	100	32.7	10	...	Cm. & Str.	
10.	S. S. E.	2	oc	...	28.828	28.5	28.0	91	32.7	10	...	Cm. & Str.	
11.	S. S. E.	3	oc	...	28.820	28.3	28.0	95	32.2	10	...	Cm. & Str.	
Midlt.	S. S. E.	2	oc	...	28.808	29.3	29.0	95	32.2	10	...	Cm. & Str.	
Totals.	...	92	om	17	17095	227.9	45.2	25	62.3	237	...	Cum. & Str.	
Mean.	SE by S.	4		2	28.712	29.5	29.0	91	32.6	10	...		

## SATURDAY, 21st.

1.	S. E.	3	os	1	28.812	29.8	29.3	91	32.5	10	...	Nimb.	At noon, lat. 63° 30' S. long. 88° 57' E. Temperature by self-registering thermo- meter, max. 33°, min. 28° 0'. Current, S. 40' W. 9'.
2.	S. S. E.	1	os	1	28.817	28.8	28.8	100	32.5	10	...	Nimb.	
3.	S. S. E.	1	cs	1	28.819	28.8	28.8	100	32.5	10	...	Cum.	
4.	SE by E.	1	c	1	28.825	28.8	28.5	94	32.5	8	...	Cum.	
5.	SE by E.	1	cm	...	28.820	28.5	28.3	96	32.5	9	...	Cm. & Cumst	
6.	SE by E.	1	bcm	...	28.821	28.5	28.3	96	32.5	9	...	Cm. & Cumst	
7.	ps.	1	cm	1	28.829	28.5	28.0	91	32.0	10	...	Cm. & Cumst	
8.	ps.	1	cm	...	28.829	29.0	28.8	96	32.5	10	...	Cm. & Cumst	
9.	Calm.	0	cm	...	28.835	29.3	29.0	95	32.5	10	...	Cm. & Cumst	
10.	Calm.	0	cm	...	28.834	29.3	28.8	92	32.5	10	...	Cm. & Cumst	
11.	ps.	1	c	...	28.825	29.3	28.8	92	32.5	10	...	Cm. & Cumst	
Noon.	ps.	1	c	...	28.817	30.0	29.8	97	32.5	10	...	Cm. & Cumst	Birds seen during the day were sooty albatross, Cape pigeon, tern, prion, stormy petrel.  Numerous bergs in sight all day. Sp. gr. 1.02502.
1.	ps.	1	c	...	28.812	30.8	29.8	85	32.5	8	...	Cum.	
2.	Calm.	0	c	1	28.806	30.8	30.3	91	32.5	9	...	Cum.	
3.	Calm.	0	c	1	28.812	31.3	30.5	88	32.5	9	...	Cum.	
4.	Calm.	0	bc	1	28.797	31.8	30.8	87	32.7	6	...	Cum.	
5.	Calm.	0	bc	1	28.795	31.8	30.8	87	32.5	8	...	Cir. Cr. cm & Cum	
6.	Calm.	0	bc	...	28.799	31.5	30.5	86	32.0	7	...	Nimb.	
7.	Vble.	0	bc	...	28.788	30.8	29.8	85	32.5	6	...	Nimb.	
8.	Vble.	1	bc	...	28.804	30.5	29.8	89	32.5	7	...	Cm. & Cumst	
9.	Calm.	0	bc	...	28.786	30.3	29.8	92	32.5	6	...	Cm. & Str.	
10.	Calm.	0	bc	...	28.784	28.8	28.8	100	32.5	3	...	Cum.	
11.	Calm.	0	bc	...	28.786	28.8	28.8	100	32.0	4	...	Cum.	
Midlt.	Calm.	0	bc	...	28.789	29.8	29.8	100	32.0	6	...	Cum.	
Totals.		14	bcm sp	9	19441	235.6	224.7	70	58.2	195	...	Cir. Cum., Cm. Str., & Nimb.	
Mean.	Vble.	1		1	28.810	29.8	29.4	92	32.4	8	...		

## SUNDAY, 22d FEBRUARY 1874.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometre reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, &c.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	Calm.	0	bc	...	28.796	29.8	29.5	94	32.2	6	...	Cum.	At noon, lat. 63° 30' s. long. 91° 11' E. Temperature by self-registering thermo- meter, max. 35°, min. 28°. Current, E. 10'.
2.	Calm.	0	bc	...	28.802	29.5	29.0	91	32.2	4	...	Cum.	
3.	Calm.	0	bc	...	28.805	29.5	29.0	91	32.0	5	...	Cum.	
4.	E.	1	bc	...	28.831	29.5	29.5	100	32.7	6	...	Cum.	
5.	Calm.	0	bc	...	28.852	29.8	29.8	100	32.7	5	...	Nimb.	
6.	Calm.	0	bc	...	28.894	30.8	30.0	87	...	7	...	Cum.	
7.	Vble.	1	bc	...	28.922	30.8	30.0	87	32.5	6	...	Cir str.	
8.	Vble.	1	bc	...	28.916	31.0	30.3	89	32.7	9	...	Cm&Cmst	
9.	Calm.	0	c	1	28.940	31.3	30.8	93	33.0	9	...	Cm&Cmst	
10.	Calm.	0	bc	1	28.951	31.8	30.8	87	32.5	7	...	Cm. & St.	
11.	...	...	...	1	...	...	...	...	...	...	...	...	
Noon.	wbs.	1	c	1	28.975	32.3	31.8	94	33.0	8	...	Cm&StNlb.	Several icebergs in sight, and a whale or two. Sp. gr. 1.02503.
1.	w.	1	bc	1	28.996	32.3	32.3	100	33.2	9	...	Cum.	
2.	w.	3	bc	1	29.013	32.3	32.3	100	33.5	9	...	Cum.	
3.	wbs.	3	bc	1	29.029	32.8	32.5	96	33.5	7	...	Cir.	
4.	w. & w.	3	bc	...	29.043	34.3	33.8	95	33.5	7	...	Cir cum.	
5.	swbw.	2	bc	...	29.056	34.3	33.3	89	33.5	7	...	Cir.	
6.	s. w.	3	bc	1	29.051	33.3	32.8	94	33.5	5	...	Cum.	
7.	wbs.	3	bc	1	29.079	32.0	31.8	98	32.5	6	...	Cum.	
8.	wbs.	3	bc	1	29.073	31.8	31.0	89	32.5	5	...	Cum.	
9.	wbs.	3	bc	...	29.087	31.3	30.8	93	32.5	8	...	Cm. & St.	
10.	wbs.	3	bc	...	29.095	31.5	31.0	93	32.5	6	...	Cm&Cmst	
11.	w. & w.	3	bc	...	29.093	31.3	31.0	96	32.5	9	...	Str.	
Midd.	swbw.	3	oc	...	29.096	31.8	31.5	95	32.5	10	...	Cir.	
Totals.	...	37	...	10	22395	32.1	31.6	81	61.2	160	...	Cir str.	Cum. & Str.
Mean.	wbs.	2	...	1	28.974	31.4	30.9	93	32.8	7	...	...	...

## MONDAY, 23d.

1.	w. & w.	5	bc	1	29.103	31.5	31.3	98	32.5	9	...	Cm&Str.	At noon, lat. 64° 15' s. long. 93° 24' E. Temperature by self-registering thermo- meter, max. 35°, min. 28° 5. Current, s. 35° E. 12'. 1 A.M., flashes of aurora.
2.	swbw.	4	bc	1	29.105	30.3	29.8	92	32.0	6	...	Cm&Nlb.	
3.	s. w.	3	bc	1	29.099	29.8	29.8	100	32.2	8	...	Cm&Nlb.	
4.	swbs.	2	c	...	29.114	29.8	28.8	83	32.5	9	...	Cm&StNlb.	
5.	swbw.	1	c	...	29.123	30.8	30.8	100	32.5	10	...	Cm&Nlb.	
6.	wbs.	1	bc	...	29.124	30.8	30.8	100	32.5	9	...	Cum.	
7.	w. & w.	2	bc	1	29.124	30.8	30.8	100	32.5	8	...	Cm&Nlb.	
8.	wbs.	3	bc	1	29.141	30.8	29.8	85	32.5	7	...	Cm&Nlb.	
9.	wbs.	2	bc	1	29.139	30.8	29.8	85	32.2	9	...	Cm&Nlb.	
10.	wbs.	2	bc	1	29.149	31.0	30.0	85	32.2	8	...	Cir cum.	
11.	swbw.	2	bc	1	29.148	31.0	29.8	83	32.2	8	...	Cm&St.	
Noon.	w.	1	bc	1	29.156	32.3	30.8	83	32.5	8	...	Cir str.	Cm&Str.
1.	Variable.	1	bc	1	29.160	33.5	32.3	87	32.5	7	...	Cir.	Cm&Cmst
2.	Calm.	0	bc	1	29.163	34.3	32.5	82	32.5	5	...	Cir.	Cm&Str.
3.	wbs.	1	bc	...	29.161	33.3	31.8	84	33.0	5	...	Cir.	Cm&Str.
4.	Calm.	0	bc	...	29.161	33.0	31.5	83	33.0	5	...	Cir.	Nimb.
5.	lbs.	1	bc	...	29.155	30.8	30.3	91	33.0	6	...	Cir.	Cm&Nlb.
6.	lbs.	1	bc	...	29.147	31.8	30.8	87	...	6	...	Str.	Cum.
7.	s. w.	2	bc	...	29.142	31.3	31.0	96	31.0	9	...	...	Str.
8.	s. w.	2	bc	...	29.123	30.8	29.5	81	31.0	9	...	...	Str.
9.	s. w.	3	oc	...	29.109	29.8	29.3	91	31.0	9	...	...	Cum.
10.	s. w.	3	ocps	...	29.097	29.8	29.8	100	31.2	9	...	...	Cum.
11.	s. w.	3	c	...	29.073	31.3	29.8	80	31.2	8	...	...	Cum.
Midd.	s. w.	3	bc	...	29.029	31.3	30.8	93	31.5	8	...	...	Cum.
Totals.	...	48	...	...	3055	30.7	11.7	2149	49.2	185	...	Cir str.	Cum str. & Nimb.
Mean.	Variable.	2	...	1	29.127	31.3	30.5	89	32.1	8	...	...	...

## TUESDAY, 24TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea.	Parameter recorded to 24" and 36" level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Description of Clouds.		REMARKS.	
	True Direction.	Force.				Dry Bulb.	Damp Bulb.			Clouds, 0 to 10.	Upper.		Lower.
1.	s.e.b.e.	3	c	1	28-923	29.8	29.8	100	32.0	9	...	Cum.	At noon, lat. 64° 8' s, long. 94° 23' E. Temperature by self-registering thermometer, max. 28° 5', min. 21° 2'.
2.	s.e.s.e.	4	c	1	28-911	29.8	29.8	100	32.0	9	...	Cum.	
3.	s.e.s.e.	5	c	1	28-956	29.8	29.8	100	32.0	9	...	Cum.	
4.	s.e.b.e.	6	c	1	28-936	29.3	29.3	100	32.0	9	...	Cum.	
5.	s.e.s.e.	6	ocmcy	1	28-922	30.3	30.3	100	32.0	10	...	Cm.&Str.	
6.	s.e.b.e.	7	omys	2	28-894	28.5	27.8	87	32.0	9	...	Cm.&Str.	Birds seen during the day were sooty albatross, Cape pigeons, tern.
7.	s.e.b.e.	6	omys	2	28-862	27.0	27.0	100	32.0	10	...	Cm.&Str.	
8.	s.e.b.e.	7	ocq	3	28-835	26.5	26.5	100	31.5	10	...	Cm.&Str.	
9.	s.e.b.e.	7	ocq	...	28-786	26.0	25.8	96	...	10	...	Cm.&Str.	
10.	s.e.b.e.	7	ocqs	...	28-755	25.8	25.3	87	...	10	...	Cum.	
11.	s.e.b.e.	8	ocqs	...	28-718	...	...	...	...	10	...	Cum.	Several bergs seen in the course of the day, but owing to the heavy snow-storm the vision was exceedingly limited.
Noon.	s.t.b.e.	7	ocqs	...	28-669	23.8	23.8	100	...	10	...	Cum.	
1.	s.e.b.e.	9	ocsf	3	28-642	23.3	23.3	100	...	10	...	Ximb.	
2.	s.e.b.e.	8	ocsf	3	28-630	23.3	23.0	92	...	10	...	Ximb.	
3.	s.e.b.e.	10	ocsf	3	28-616	23.3	23.3	100	...	10	...	Ximb.	
4.	s.e.b.e.	8	ocsf	4	28-582	23.3	23.3	100	...	10	...	Ximb.	
5.	s.e.b.e.	10	ocsf	3	28-558	22.8	22.8	100	29.5	10	...	Str.	
6.	s.e.b.e.	8	ocsf	4	28-545	22.8	22.8	100	31.5	10	...	Str.	
7.	s.e.b.e.	7	ocq	4	28-529	23.5	...	...	31.5	10	...	Cm.&Str.	
8.	s.e.b.e.	6	oc	4	28-522	23.8	...	...	31.5	10	...	Cm.&Str.	
9.	s.s.s.e.	7	eq	4	28-512	24.3	24.0	91	31.5	10	...	Cum.	
10.	s.s.s.e.	6	eq	4	28-508	24.3	24.2	99	31.5	10	...	Cum.	
11.	s.s.s.e.	7	eq	4	28-509	26.0	25.8	96	31.5	10	...	Cum.	
Mult.	s.s.s.e.	5	eq	4	28-520	25.8	25.8	100	31.5	10	...	Cum.	
Totals.	...	164	...	57	17040	133.1	123.5	158	25.5	...	...	Cm str., & Ximb.	
Mean.	s.e.b.e.	7	ocsm	3	28-710	25.8	25.9	98	31.6	10	...		

## WEDNESDAY, 25TH.

1.	s.b.e.	7	oms	3	28-537	26.0	25.8	96	31.5	10	...	Str.	At noon, lat. 63° 49' s, long. 94° 51' E. Temperature by self-registering thermometer, max. 36°, min. 26° 7'.
2.	s.b.e.	5	oms	3	28-556	26.8	26.8	100	31.5	10	...	Str.	
3.	s.b.e.	5	oms	2	28-582	26.5	26.5	100	31.5	10	...	Str.	
4.	s.b.e.	4	ocm	2	28-598	27.3	27.3	100	31.5	10	...	Cm.&Str.	
5.	s.b.e.	5	oc	2	28-630	27.3	27.3	100	32.0	10	...	Cum.	
6.	s.b.e.	3	om	1	28-650	27.8	27.8	100	32.0	10	...	Cum.	Birds seen during the day were snow birds, a brown petrel, tern, lestris, sooty albatross, prion and Cape pigeons.
7.	s.b.e.	4	om	1	28-664	27.8	27.8	100	32.0	10	...	Cum.	
8.	s.b.e.	3	om	...	28-686	27.8	27.8	100	...	10	...	Cum.	
9.	s.b.e.	3	om	...	28-709	30.3	29.3	84	...	10	...	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
11.	sw.b.w.	3	c	1	28-729	28.8	28.3	91	31.5	10	...	Cum.	Numerous bergs and loose pack ice in sight all day. Sp. gr. 1.02496.
Noon.	s.s.w.	3	c	1	28-738	28.8	28.0	86	31.5	10	...	Cum.	
1.	sw.b.s.	3	c	1	28-772	28.0	27.8	96	31.0	10	...	Cm.&Str.	
2.	sw.b.s.	4	ocsm	2	28-801	28.8	28.5	96	31.5	10	...	Str.	
3.	sw.b.s.	4	cm	2	28-812	29.0	28.5	92	31.5	10	...	Cum.	
4.	s.w.	5	cm	...	28-840	29.5	28.5	84	31.5	10	...	Cum.	
5.	s.w.	4	cm	...	28-869	29.6	28.5	82	31.7	10	...	Cum.	
6.	sw.b.w.	5	cm	2	28-903	29.8	28.8	83	32.0	10	...	Cum.	
7.	s.w.	6	eq	2	28-938	29.8	28.8	83	32.5	10	...	Cum.	
8.	s.w.	5	eq	2	28-943	30.3	29.3	83	32.5	10	...	Cum.	
9.	s.w.	6	oc	...	28-980	30.0	28.8	81	33.0	10	...	Cum.	
10.	s.w.	5	oc	2	28-987	29.8	28.3	76	33.0	10	...	Cum.	
11.	s.w.	6	oc	2	29-004	29.3	27.8	75	32.7	10	...	Cum.	
Midt.	sw.b.w.	4	bc	2	29-023	28.8	27.3	75	32.7	7	...	Cm.&Nb.	
Totals.	...	162	...	31	17942	197.9	183.6	2063	40.6	227	...	Cum & Str.	
Mean.	s.s.w.	4	ocms	2	28-780	28.6	28.0	89	31.9	10	...		

## THURSDAY, 26TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
1.	sw by w.	4	bc	...	29.030	29.0	27.8	79	32.5	8	...	Cum.	At noon, lat. 62° 26' S. long. 95° 44' E. Temperature by self-registering thermo- meter, max. 36°, min. 28°. Current, S. 20° E. 13'. Slight aurora.
2.	sw by w.	6	bc	...	29.052	29.5	28.3	80	32.2	6	...	Cm. & Nb.	
3.	sw by w.	5	bc	...	29.063	29.5	28.3	80	32.2	7	...	Cm. & Nb.	
4.	w by s.	5	bc	...	29.081	30.3	28.8	77	32.5	5	...	Cir.	
5.	w by s.	4	bc	2	29.106	29.8	29.8	100	...	6	...	Cum.	
6.	w. s. w.	3	c	1	29.126	31.3	30.5	88	31.0	10	...	Cum.	
7.	w. s. w.	3	c	1	29.121	31.8	32.3	100	31.0	10	...	Cum.	
8.	sw by w.	3	c	1	29.145	32.8	32.0	91	33.0	10	...	Cum.	
9.	w. s. w.	3	bc	...	29.148	33.3	32.3	89	33.0	9	...	Cum.	
10.	sw by w.	3	bc	...	29.160	34.3	32.5	82	...	8	...	Cum.	
11.	s. w.	3	bc	...	29.167	34.3	33.5	92	33.0	9	...	Cum.	
Noon.	s. w.	3	c	1	29.182	34.8	34.0	92	...	10	...	Cum.	Birds seen during the day were sooty albatross, Cape pigeon, prion, tern, and stormy petrel. Sp. gr. 192514. Several bergs in sight.  From 7 P.M. we were lying to under the lee of an iceberg, keeping in position by steam.
	s. w.	3	c	1	29.183	35.3	34.3	90	33.2	9	...	Cum.	
1.	sw by s.	3	bc	1	29.174	35.3	34.5	92	33.2	7	...	Cum.	
3.	sw by s.	3	c	1	29.135	35.0	34.3	93	33.5	10	...	Cm. & Cumst	
4.	sw by s.	3	oe	1	29.102	34.8	34.3	95	33.0	10	...	Cm. & Str.	
5.	sw by s.	4	ls	1	29.033	33.8	31.8	70	32.2	10	...	Str.	
6.	sw by s.	5	os	1	29.001	33.3	32.8	94	32.2	10	...	Cum.	
7.	sw by s.	6	ocpls	2	28.846	...	...	...	...	10	...	Str.	
8.	sw by s.	7	ocpls	...	28.809	33.3	32.3	89	32.0	10	...	Str.	
9.	sw by s.	9	ocplm	...	28.802	35.3	35.3	100	33.0	10	...	Cm. & Str.	
10.	sw by w.	9	ocplm	...	28.793	35.5	35.0	95	33.0	10	...	Cm. & Str.	
11.	w by s.	9	ocplm	...	28.785	35.3	33.8	86	33.0	10	...	Cm. & Str.	
Midd.	w by s.	9	ocplm	...	28.813	35.3	33.3	80	33.0	10	...	Cm. & Str.	
Totals.	...	115	bc & ocplms	14	857	72.9	51.8	2043	51.7	214	...	Cir.	Cum., Str., & Nimb.
Mean.	sw by w.	5		1	29.036	33.2	32.2	89	32.6	9	...		

## FRIDAY, 27TH.

Hour.	Time Direction.	Force.	Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Dry Bulb.	Wet Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Upper.	Lower.	REMARKS.
1.	sw by w.	8	ocplm	3	28.830	33.8	33.3	94	33.0	10	...	Nimb.	At noon, lat. 62° 2' S. long. 97° 6' E. Temperature by self-registering thermo- meter, max. 35°, min. 32°. Current, S. 64° E. 23'. At daylight made sail to the northward.
2.	sw by w.	9	ocplm	3	28.866	34.8	34.3	95	33.0	10	...	Nimb.	
3.	sw by w.	8	ocplm	4	28.814	34.8	33.8	90	...	10	...	Cum.	
4.	sw by w.	9	ocplm	5	28.830	34.8	33.8	90	...	10	...	Cum.	
5.	sw by w.	8	ocplm	...	28.851	34.3	32.5	82	...	10	...	Cum.	
6.	sw by w.	9	ocpls	5	28.881	34.0	32.8	87	33.0	10	...	Cum.	
7.	sw by w.	7	c	5	28.936	34.0	32.0	80	34.0	10	...	Cum.	
8.	sw by w.	8	bc	5	28.956	34.3	30.8	69	34.0	9	...	Cum.	
9.	sw by w.	7	bc	...	28.952	34.3	32.5	82	33.0	8	...	Cum.	
10.	sw by w.	8	c	...	28.975	33.8	32.8	89	33.0	9	...	Cum.	
11.	sw by w.	6	cm	...	28.975	34.3	32.5	82	33.5	10	...	Cum.	
Noon.	sw by w.	7	cm	...	28.976	34.3	32.8	84	34.0	10	...	Cum.	Birds seen during the day were night hawks, Cape pigeon, stormy petrel, prion, and one white albatross. Sp. gr. 192515. Some whales seen. A few icebergs visible.
	sw by w.	6	ocplm	4	28.978	34.0	32.8	87	34.0	10	...	Cum.	
1.	sw by w.	7	ocplm	3	28.967	34.3	33.0	86	34.0	10	...	Cum.	
2.	sw by w.	6	ocpls	4	28.963	33.8	32.8	89	34.0	10	...	Cum.	
3.	sw by w.	7	ocpls	3	28.954	33.5	32.8	92	34.0	10	...	Cum.	
4.	sw by w.	6	bcps	...	28.949	33.8	33.3	94	34.0	9	...	Cum.	
5.	sw by w.	6	bc	4	28.956	34.8	33.3	85	34.0	7	...	Cir.	
6.	sw by w.	6	ocps	...	28.955	33.8	33.8	100	34.0	7	...	Cir.	
7.	sw by w.	7	c	...	28.991	32.8	32.3	94	33.7	10	...	Cir.	
8.	sw by w.	6	bc	...	28.997	34.0	32.8	87	34.0	6	...	Cum.	
9.	sw by w.	7	bc	...	28.995	34.3	33.8	95	34.0	8	...	Cum.	
10.	w by s.	6	ocpls	...	29.001	33.8	33.3	94	34.2	10	...	Nimb.	
Midd.	w by s.	7	ocplm	...	29.001	34.3	33.8	95	34.2	10	...	Nimb.	
Totals.	...	171	ocpls	48	22558	98.7	71.7	2122	78.6	223	...	Cir.	Cum. & Nimb.
Mean.	sw by w.	7		4	28.949	34.1	33.0	88	33.7	9	...		

## SATURDAY, 28TH FEBRUARY 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and sea level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	wbs.	7	cqs	4	...	...	...	...	34.0	8	...	Cum.	At noon, lat. 50° 56' s. long. 96° 14' E. Temperature by self-registering thermometer, max. 36°, min. 32° 5. Current, N. 5° W. 22'. Slight flashes of aurora.
2.	wbs.	6	bc	5	29.076	33.8	32.8	89	34.0	9	...	Cum.	
3.	w.s.w.	8	bcq	4	29.114	33.8	32.8	89	34.0	10	...	Cum.&Str.	
4.	w.	7	bcq	5	29.174	34.0	33.0	89	34.0	8	...	Cum.&Str.	
5.	wbs.	7	bcq	...	29.245	33.8	32.8	89	34.0	8	Cir cum.	Cum.&Str.	
6.	wbs.	8	bcq-p	5	29.256	33.8	32.8	89	34.0	6	...	Cum.&Nb.	
7.	wbs.	7	bc	5	...	34.3	33.8	95	34.2	9	...	Cum.&Str.	
8.	wbs.	7	bc	...	29.297	34.3	31.8	76	34.2	10	...	Cum.&Str.	
9.	w.s.w.	6	bc	4	29.331	35.3	33.8	86	34.5	7	...	Cum.	
10.	w.s.w.	6	cqp	4	29.335	35.3	33.8	86	34.5	10	...	Cum.	
11.	w.s.w.	6	cp	4	29.319	35.8	34.8	91	34.7	9	...	Cum.	
Noon.	N.W.	6	cps	4	29.317	35.3	34.5	92	34.7	10	...	Cum.	Birds seen during the day were Cape pigeons, stormy petrel, sooty albatross, prion, and night hawks. Sp. gr. 102510. Several bergs sighted.
1.	swbw.	6	ocps	5	29.294	35.3	34.5	92	34.7	10	...	Cum.	
2.	N.W.	7	oms	5	29.282	34.5	34.0	95	34.7	10	...	Str.	
3.	swbs.	6	oms	5	29.259	34.0	33.8	98	34.5	10	...	Str.	
4.	N.W.	7	oms	5	29.224	33.8	33.8	100	34.5	10	...	Str.	
5.	N.W.	6	oms	...	29.219	34.3	34.0	97	...	10	...	Str.	
6.	swbw.	7	op	...	29.191	34.8	34.3	95	...	10	...	Cum.	
7.	swbw.	7	cps	5	29.155	34.8	34.8	100	34.7	10	...	Cum.	
8.	swbw.	7	op	5	29.137	35.3	35.0	97	35.0	10	...	Cum.	
9.	swbw.	7	ocd	...	29.105	35.0	34.8	98	...	10	...	Str.	
10.	swbw.	8	od	4	29.084	35.0	34.8	98	34.5	10	...	Str.	
11.	w.s.w.	8	od	5	29.111	35.0	34.8	98	34.5	10	...	Str.	
Midt.	w.s.w.	8	ocdm	4	29.095	34.8	34.8	100	34.5	10	...	Str.&Cum.	
Totals.	...	165	bcqps	87	4620	106.1	90.1	69	84	224	Cir cum.	Cum. & Str.	
Mean.	w.s.w.	7		4	29.210	34.6	33.9	93	34.4	9			

## SUNDAY, 1ST MARCH.

1.	swbw.	8	o	5	29.119	34.8	34.5	97	34.5	10	...	Cum.	At noon, lat. 58° 5' s. long. 101° 56' E. Temperature by self-registering thermometer, max. 37° 5, min. 33° 5. Current, N. 19° E. 18'.
2.	swbw.	8	o	5	29.115	35.3	34.8	95	34.5	10	...	Cum.	
3.	w.s.w.	8	o	5	29.115	35.3	34.8	95	34.5	10	...	Cum.	
4.	w.s.w.	7	o	5	29.150	35.8	35.3	95	34.5	10	...	Cum.	
5.	w.s.w.	7	o	6	29.204	35.8	34.8	91	...	10	...	Cum.	
6.	w.s.w.	7	o	...	29.204	35.8	35.5	97	34.5	10	...	Cum.	
7.	w.s.w.	7	o	6	29.249	35.8	35.5	97	...	10	...	Cum.	
8.	w.s.w.	6	o	6	29.239	35.8	35.8	100	34.5	10	...	Cum.	
9.	w.s.w.	7	om	...	29.247	36.0	35.8	98	35.0	10	...	Str.	
10.	swbw.	6	oc	...	29.203	36.3	35.8	95	35.0	10	...	Cum.	
11.	swbw.	6	ocd	4	29.281	37.0	36.5	96	35.0	10	...	Cum.	
Noon.	N.W.	7	os	4	29.287	36.8	36.3	96	35.0	10	...	Str.	Birds seen during the day were Cape pigeons, prion, night hawks, stormy petrel, and albatross.
1.	N.W.	6	os	4	29.306	36.3	35.8	96	35.0	10	...	Cum.&Str.	
2.	N.W.	7	om	4	29.304	36.3	36.0	98	35.0	10	...	Cum.&Str.	
3.	N.W.	6	om	4	...	36.8	36.3	96	35.0	10	...	Cum.&Str.	
4.	N.W.	7	om	4	29.338	37.0	36.5	96	35.0	10	...	Cum.&Str.	
5.	N.W.	6	om	4	29.382	37.3	36.3	91	35.0	10	...	Cum.&Str.	
6.	N.W.	5	om	4	29.402	36.8	35.8	91	...	10	...	Cum.	
7.	swbw.	6	om	4	29.403	36.5	35.8	94	35.0	10	...	Str.	
8.	swbw.	5	om	4	29.425	36.5	36.3	98	36.0	10	...	Str.	
9.	swbw.	6	omd	3	29.464	36.5	36.3	98	36.2	10	...	Str.	
10.	w.s.w.	5	omd	...	29.479	36.5	36.3	98	36.2	10	...	Str.	
11.	w.s.w.	6	omd	...	29.500	36.0	35.8	98	36.2	10	...	Str.	
Midt.	w.s.w.	5	omd	...	29.520	36.5	35.8	94	36.0	10	...	Str.	
Totals.	...	154	ompsd	81	7086	149.5	138.4	140	107.6	240			
Mean.	swbw.	6		4	29.308	36.2	35.8	96	35.1	10		Str. & Cum.	

MONDAY, 2d MARCH 1871.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 0 at Sea Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	sw by w	4	op	3	29.480	36.8	35.8	91	35.5	10	...	Cum.	At noon, lat. 55° 35' s. long. 106° 16' E. Temperature by self-registering thermometer, max. 41°, min. 35°.
2.	sw by w	4	op	3	29.519	37.3	35.8	87	35.7	10	...	Cum.	
3.	sw by w	4	o	3	29.552	36.8	36.8	100	36.0	10	...	Cum.	
4.	sw by s.	5	o	3	29.550	36.8	36.8	100	37.0	10	...	Cum.	Current, S. 19° E. 18'.
5.	sw by s.	5	om	...	29.545	37.5	37.3	98	37.2	10	...	Str.	
6.	sw by s.	6	om	...	29.543	37.3	38.0	100	37.2	10	...	Str.	
7.	sw by s.	6	om	4	29.540	38.5	38.3	93	37.0	10	...	Str.	Birds seen during the day were molly-mawks, stormy petrel, Cape hen, prion, and night hawks. One iceberg seen. Sp. gr. 102502.
8.	sw by s.	7	o	...	29.538	38.5	38.3	96	37.0	10	...	Str.	
9.	sw by s.	6	o	...	29.571	40.3	39.8	96	37.7	10	...	Str.	
10.	sw by s.	7	o	...	29.581	40.0	39.8	98	38.0	10	...	Str.	
11.	sw by s.	7	o	...	29.591	40.0	39.8	98	38.0	10	...	Str.	
Noon.	sw by s.	7	om	3	29.619	39.8	39.8	100	37.5	10	...	Nimb.	
1.	sw by s.	7	om	...	29.627	39.8	39.8	100	38.5	10	...	Nimb.	
2.	w by s.	6	o	...	29.641	39.8	39.3	96	38.0	10	...	Nimb.	
3.	w by s.	6	o	...	29.692	39.3	38.8	96	37.5	10	...	Nimb.	
4.	w by s.	5	om	...	29.716	38.3	37.8	96	38.0	10	...	Cum.	
5.	w by s.	4	om	...	29.775	37.8	37.3	96	38.0	9	...	Cum.	
6.	sw by w.	4	be	...	29.811	37.0	36.0	91	38.0	7	Cir str.	Cum & Cum. str.	
7.	sw by w.	4	be	...	29.861	37.0	36.3	93	38.0	8	Cir str.	Cum & Cum. str.	
8.	sw by w.	4	be	3	29.889	37.0	36.3	93	38.0	7	Cir str.	Cum & Cum. str.	
9.	sw by w.	3	be	3	29.910	37.3	36.3	91	38.0	3	Cir str.	Cum & Cum. str.	
10.	w by s.	2	be	3	29.945	37.8	36.3	87	38.5	4	Cir.	Cum str.	
11.	w by s.	2	be	3	29.948	37.3	35.8	87	38.0	3	Cir.	Cum str.	
Midd.	w by s.	2	be	3	29.948	37.3	35.8	87	38.0	3	Cir.	Cum str.	
Totals.	...	121	om & be	31	16037	196.6	184.6	114	180.0	211	Cir str.	Cum., Str., & Nimb.	
Mean.	W.N.W.	5		3	29.668	38.2	37.7	95	37.5	9			

TUESDAY, 3d.

1.	w.s.w.	3	be	2	29.956	36.8	35.8	91	38.0	8	Cir.	Cum.	At noon, lat. 55° 55' s. long. 105° 35' E. Temperature by self-registering thermometer, max. 39°, min. 35° 5.
2.	w.s.w.	3	be	2	29.976	36.8	35.7	90	38.0	9	Cir.	Cum.	
3.	sw by w.	2	be	...	29.998	36.8	35.3	87	38.0	7	Cir.	Cum.	
4.	w.s.w.	2	be	...	30.007	36.9	35.3	87	38.0	8	Cir.	Cum. & Str.	Current, S. 19° E. 19'. Moon greasy.
5.	w.s.w.	2	be	...	30.045	37.3	35.5	86	38.0	8	Cir.	Cum. & Str.	
6.	w.s.w.	1	be	...	30.045	37.8	36.0	85	37.5	7	Cir.	Cum. & Str.	
7.	w.s.w.	1	e	...	30.047	38.0	36.3	86	37.5	9	...	Cum. & Str.	A few slight flashes of aurora between 2 and 3 A.M.  Birds seen during the day were tern, stormy petrel, Cape pigeons.  Sp. gr. 102511.
8.	w.s.w.	1	e	...	30.060	37.5	36.0	86	37.2	10	...	Str.	
9.	w.	2	e	...	30.084	37.8	36.8	91	37.5	10	...	Str.	
10.	w.	1	e	...	30.081	37.8	35.8	83	37.5	10	...	Str.	
11.	w by s.	1	be	...	30.078	38.8	37.8	92	37.5	8	...	Str.	
Noon.	w by s.	2	be	...	30.096	38.3	37.5	93	37.5	8	...	Cum. & Str.	
1.	W.N.W.	2	oe	...	30.067	38.0	37.0	91	37.5	10	...	Cum.	
2.	S.N.W.	2	e	...	30.046	37.3	36.0	88	37.5	8	...	Cum.	
3.	S.N.W.	2	e	...	30.049	36.3	35.3	92	37.5	9	...	Cum.	
4.	S.N.W.	1	e	...	30.044	36.3	35.3	91	...	10	Cir str.	Cum.	
5.	S.N.W.	1	be	...	30.043	36.3	35.8	96	...	8	Cir str.	Cum.	
6.	Calm.	0	be	...	30.053	36.8	35.5	88	...	7	Str.	Str. & Cum.	
7.	Calm.	0	be	0	30.028	35.8	34.8	91	37.2	4	Cir str.	...	
8.	Calm.	0	be	...	30.068	36.3	34.8	87	37.0	5	Cir str.	...	11.45 P.M., observed a brilliant aurora stretching in four concentric arcs from E.S.E. to W.S.W., between the zenith and an altitude of 30°.
9.	Calm.	0	be	...	30.055	35.8	35.0	93	37.2	7	...	Cum.	
10.	Calm.	0	be	...	30.064	35.8	35.0	93	37.2	6	...	Cum.	
11.	S.E.	1	be	...	30.050	35.8	35.0	93	37.0	7	Cir str.	Cr. & Cum.	
Midd.	S.E.	2	be	...	30.046	35.8	34.8	91	37.0	2	Cir str.	Cir cum.	
Totals.	...	32	be	4	1086	166.9	138.1	231	103	185	Cir str.	Cum. & Str.	
Mean.	w by s.	1		1	30.045	36.9	35.8	90	37.5	8			

## WEDNESDAY, 4TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	SE by S.	2	bc	0	30.052	36.3	35.3	91	38.0	2	Cir cum.	Cum.	At noon, lat. 53° 17' S. long. 109° 23' E. Temperature by self-registering thermo- meter, max. 40° 5', min. 35° 0'. Current, S. 40° E. 15'. Aurora visible from midnight to 1.30 a.m., varying in brightness.
2.	SE by S.	3	bc	...	30.056	36.0	34.8	89	38.0	5	...	Cum.	
3.	SE by S.	3	bc	...	30.070	35.8	34.8	91	38.0	3	...	Cum. & Str.	
4.	SE by S.	2	bc	...	30.080	36.0	34.8	89	38.0	3	...	Cum. & Str.	
5.	SE by S.	2	bc	...	30.083	36.3	34.8	87	38.0	...	...	Cum. & Str.	
6.	E. S. E.	1	...	...	30.084	36.3	34.8	87	38.0	6	...	Cum.	
7.	E. S. E.	2	bc	1	30.101	35.8	35.8	100	38.0	4	Cir.	Str.	
8.	E. S. E.	2	bc	1	30.096	39.0	37.0	84	38.0	4	Cir.	Str.	
9.	E.	2	bc	...	30.094	40.0	38.0	81	38.5	9	...	Cum.	
10.	E. N. E.	2	bc	...	30.084	40.3	38.8	88	38.5	7	Cir.	Str.	
11.	E. by S.	2	bc	...	30.076	39.0	37.8	90	39.0	5	Cir.	Cir cum.	
Noon.	E. by S.	3	bc	1	30.073	39.0	37.8	90	39.5	5	Cir.	Cum.	Birds seen during the day were sooty albatross, prion, Cape hens. One iceberg seen.
	E. by S.	2	c	...	30.072	39.0	38.0	92	39.7	9	...	Cum.	Swell from S. S. W. Sp. gr. 1.021.
	E. by S.	3	c	...	30.069	39.0	38.3	94	39.7	10	...	Cum.	
	N. E.	2	cm	...	30.057	39.3	37.5	86	40.0	10	...	Cum.	
	N. E.	3	cm	...	30.037	39.3	37.5	86	39.7	10	...	Cum.	
	N. E.	2	cm	...	30.042	39.8	37.8	84	40.0	10	...	Cum.	
	N. E.	3	cm	...	30.060	39.3	38.8	96	39.7	10	...	Cum.	
	N. E.	3	cm	...	30.010	39.0	38.8	98	39.0	10	...	Str.	
	N. E.	2	cm	...	29.995	39.3	39.0	97	39.0	10	...	Str.	
	N. N. E.	2	of	...	29.989	39.8	39.8	100	39.0	10	...	Str.	
	N. N. W.	3	of	...	30.001	40.5	40.3	98	39.0	10	...	Str.	
	N. N. W.	5	of	...	29.990	40.8	40.5	98	39.5	10	...	Str.	
Midd.	NW by S.	6	om	...	29.990	40.8	40.5	97	39.5	10	...	Str.	
Totals.	...	62	bc & cum	3	1261	205.7	181.3	2196	213.3	172	Cir.	Cum. & Str.	
Mean.	E. N. E.	3		1	30.053	38.6	37.6	91	38.9	7			

## THURSDAY, 5TH.

1.	SW by W.	5	cm	2	29.978	40.8	39.8	92	39.5	10	...	Nimb.	At noon, lat. 51° 59' S. long. 112° 58' E. Temperature by self-registering thermo- meter, max. 43°, min. 38° 5'. Current, S. 8'.
2.	SW by W.	4	cm	2	29.960	40.5	40.5	100	39.5	10	...	Nimb.	
3.	SW by W.	5	cm	2	29.974	40.8	40.8	100	39.5	10	...	Nimb.	
4.	SW by W.	5	cm	2	29.981	41.0	41.0	100	38.7	10	...	Nimb.	
5.	SW by W.	5	om	...	29.994	41.0	41.0	100	39.2	10	...	Str.	
6.	SW by W.	5	om	...	30.010	41.3	41.3	100	39.2	10	...	Str.	
7.	SW by W.	5	omd	...	30.017	41.3	41.3	100	39.2	10	...	Str.	
8.	NNW by W.	5	om	...	30.020	40.8	41.5	100	39.5	10	...	Str.	
9.	NNW by W.	5	om	...	30.036	41.8	41.5	98	39.5	10	...	Str.	
10.	NNW by W.	5	om	...	30.042	42.3	42.3	100	39.5	10	...	Str.	
11.	NNW by W.	5	om	...	30.063	42.0	42.0	100	39.5	10	...	Str.	Birds seen during the day were Cape Hens and some brown and white breasted petrel. Sp. gr. 1.02516.
Noon.	NNW by W.	5	om	...	30.059	42.3	42.0	98	39.5	10	...	Str.	
	NNW by W.	5	omd	...	30.064	41.8	41.8	100	39.0	10	...	Nimb.	
	SW by W.	5	om	...	30.069	41.8	41.8	100	39.0	10	...	Nimb.	
	SW by W.	5	c	...	30.077	42.8	41.8	92	39.0	10	...	Cum str.	
	SW by W.	6	c	...	30.074	42.0	41.8	98	40.0	10	Cir str.	Str.	
	SW by W.	5	c	...	30.089	41.8	41.7	99	40.0	9	Cir str.	Cum. & Str.	
	SW by W.	5	c	2	30.107	41.8	41.5	99	40.0	10	Cir str.	Cum.	
	SW by W.	5	c	...	30.110	41.8	41.8	100	40.0	9	Cir str.	Cum.	
	SW by W.	5	c	...	30.137	41.8	41.3	96	40.0	10	...	Cum.	
	SW by W.	5	c	...	30.124	41.8	41.8	100	40.0	10	...	Nimb.	
	SW by W.	5	c	...	30.110	41.8	41.8	100	40.0	10	...	Nimb.	
10.	SW by W.	6	om	...	30.127	41.8	41.8	100	40.0	10	...	Nimb.	Nimb.
Midd.	SW by W.	5	om	...	30.123	41.8	41.8	100	40.0	10	...	Nimb.	
Totals.	...	121		10	1342	38.7	35.7	212	229.3	238			
Mean.	N. N. W.	5		2	30.056	41.6	41.5	99	39.6	10	Cir str	Cum., Str., & Nimb.	

## FRIDAY, 6TH MARCH 1874.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time.	Direction.	Force.			Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N <sup>W</sup> .	5	f	...	30.117	41.8	41.8	100	40.5	10	...	Str.	At noon, lat. 50° 47' S. long. 118° 33' E. Temperature by self-registering thermometer, max. 47° min. 41°. Current S. 9'. 1 A.M., fog cleared. 2 A.M., bands of cir and cir str. radiating from a point in the S.W. horizon.
2.	N <sup>W</sup> .	6	e	...	30.132	41.9	41.8	99	40.5	9	Cir cum.	Cum.	
3.	N <sup>W</sup> .	6	be	...	30.134	42.8	42.5	98	41.0	6	Cir str.	Cum.	
4.	N <sup>W</sup> .	6	be	...	30.138	43.0	42.7	97	41.7	4	Cir.	Str.	
5.	N <sup>W</sup> .	6	be	...	...	41.8	44.0	94	42.7	8	...	Cum.	
6.	N <sup>W</sup> .	5	be	1	30.168	41.8	41.0	94	44.0	8	...	Cum.	
7.	N <sup>W</sup> .	5	e	...	30.160	45.3	44.5	94	44.5	10	...	Cum.	
8.	N <sup>W</sup> .	5	e	...	30.158	45.8	45.0	94	44.7	10	...	Cum & Cumst	
9.	N <sup>W</sup> .	5	e	...	30.182	46.8	45.8	93	45.0	10	...	Cum & Cumst	
10.	N <sup>W</sup> .	5	e	...	30.177	46.3	45.8	97	45.0	10	...	...	
11.	N <sup>W</sup> .	5	e	...	30.155	47.3	46.3	93	45.0	10	...	...	
Noon.	N <sup>W</sup> .	5	be	...	30.148	46.8	45.8	93	44.7	9	...	Cum str.	Birds seen during the day were albatross and white-breasted petrel. Sp. gr. 1.02520.
1.	N.	5	e	...	30.144	46.5	46.0	97	44.7	8	...	Cum str.	
2.	N.	5	e	...	30.133	46.5	46.0	97	44.7	10	...	Cum str.	
3.	N.	5	e	...	...	...	...	...	...	...	...	...	
4.	N.	5	e	...	30.120	46.3	45.8	97	45.0	10	...	Cum.	
5.	N.	5	cu	...	30.115	46.3	46.0	98	45.5	10	...	Cum & Str.	
6.	N <sup>W</sup> .	4	ef	...	30.125	46.5	46.3	89	45.7	10	...	Cum.	
7.	N.	5	cu	...	30.114	46.3	46.3	100	45.7	10	...	Nimb.	
8.	N.	4	cu	...	30.121	45.8	45.8	100	45.0	10	...	Nimb.	
9.	N.	5	cu	...	30.086	45.7	45.5	99	44.0	10	...	Str.	
10.	N <sup>W</sup> .	6	cu	...	30.086	45.5	45.3	98	44.0	10	...	Str.	
11.	N <sup>W</sup> .	5	oe	2	30.086	45.0	44.8	99	43.5	10	...	Cum.	
Midd.	N <sup>W</sup> .	5	oe	...	30.079	44.8	44.7	99	43.7	10	...	Cum.	
Totals.	...	123	be & cu	3	2878	122.6	112.5	2229	90.6	210	...	Cum., Str., & Nimb.	
Mean.	N.	5	...	1	30.131	45.3	44.9	97	43.9	9	...	Cir str.	

## SATURDAY, 7TH.

1.	N <sup>W</sup> .	5	oe	1	30.079	44.8	44.8	100	43.5	10	...	Cum.	At noon, lat. 50° 1' S. long. 123° 4' E. Temperature by self-registering thermometer, max. 50° 5', min. 44°. Current, S. 48° E. 6'.
2.	N <sup>W</sup> .	5	oe	...	30.080	45.0	44.8	99	43.5	10	...	Cum.	
3.	N <sup>W</sup> .	6	oe	...	30.084	45.8	44.3	90	43.5	10	...	Cum str.	
4.	N <sup>W</sup> .	5	oe	...	30.085	45.8	44.3	90	43.5	10	...	Cum str.	
5.	N <sup>W</sup> .	5	o	...	30.072	46.8	45.8	93	43.5	10	...	Cum str.	
6.	N <sup>W</sup> .	5	e	1	30.099	46.3	45.8	87	44.5	9	...	Cum.	
7.	N <sup>W</sup> .	5	oe	2	30.099	47.0	46.0	93	45.0	9	...	Cum.	
8.	N <sup>W</sup> .	5	e	2	30.100	47.3	46.8	87	45.0	9	...	Cum.	
9.	N <sup>W</sup> .	5	be	...	30.077	48.5	47.8	84	45.2	8	Str.	Cum.	
10.	N <sup>W</sup> .	5	oe	...	30.056	48.0	47.5	87	45.5	10	...	Cum.	
11.	N <sup>W</sup> .	5	oe	...	30.042	47.3	47.3	100	45.5	10	...	Cum.	
Noon.	N <sup>W</sup> .	3	oe	2	30.048	48.5	48.0	96	45.5	10	...	Cum.	Birds seen during the day were albatross, pigeon, Cape pigeon, and white-breasted petrel. Sp. gr. 1.02524.
1.	N <sup>W</sup> .	5	e	...	30.003	49.0	48.0	93	45.5	9	...	Cum.	
2.	N <sup>W</sup> .	5	be	...	29.970	49.3	48.0	81	45.5	8	...	Cum.	
3.	N <sup>W</sup> .	5	be	...	29.944	49.3	48.0	81	45.5	8	...	Cum.	
4.	N <sup>W</sup> .	5	be	...	29.932	48.5	47.5	84	45.5	6	...	Cum.	
5.	N <sup>W</sup> .	5	be	1	29.941	48.3	47.8	87	45.5	7	...	Cum.	
6.	N <sup>W</sup> .	5	be	1	29.941	48.3	47.8	87	45.5	3	Cir str.	Str. & Cum.	
7.	N <sup>W</sup> .	6	be	2	29.936	47.8	47.3	87	46.0	3	Cir str.	Str.	
8.	N <sup>W</sup> .	6	be	...	29.940	47.5	47.0	90	46.0	2	Cir str.	...	
9.	N <sup>W</sup> .	6	be	...	29.940	48.3	47.5	95	47.0	3	...	Cum.	
10.	N <sup>W</sup> .	7	e	...	29.920	48.5	47.8	95	47.0	9	...	Cum.	
11.	N <sup>W</sup> .	7	e	...	29.911	48.8	48.0	95	47.2	10	...	Cum.	
Midd.	N <sup>W</sup> .	6	e	...	29.891	48.8	47.8	93	47.5	10	...	Cum.	
Totals.	...	127	be cu	11	169	185.5	165.7	120	121.9	193	...	Cir str.	Cum.
Mean.	N <sup>W</sup> .	5	...	2	30.006	47.4	46.9	95	45.3	8	...	...	

## SUNDAY, 8TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
1.	N $\frac{1}{2}$ W.	6	c	3	29.868	48.8	48.5	99	47.5	9	...	Cum.	At noon, lat. 49° 26' s. long. 126° 43' E. Temperature by self-registering thermo- meter, max. 52°, min. 47°. Current, s. 49° E. 27.
2.	N $\frac{1}{2}$ W.	6	c	3	29.858	48.8	48.3	97	48.0	10	...	Nimb.	
3.	N $\frac{1}{2}$ W.	7	oq	3	29.842	48.8	48.3	97	48.0	10	...	Cum.	
4.	N $\frac{1}{2}$ W.	6	c	3	29.833	48.8	47.8	93	47.7	9	...	Cum.	
5.	N $\frac{1}{2}$ W.	6	bc	...	29.837	48.8	48.0	94	47.0	9	Cir cum.	Cum.	
6.	N $\frac{1}{2}$ W.	6	bc	...	29.847	48.8	47.9	94	47.5	9	Cir cum.	Cum & Str.	
7.	N $\frac{1}{2}$ W.	5	bc	...	29.838	48.8	48.0	94	47.5	8	Cir cum.	Cum. & Str.	
8.	N $\frac{1}{2}$ W.	6	c	...	29.835	48.8	48.0	94	47.8	10	...	Cum.	
9.	N $\frac{1}{2}$ W.	6	c	...	29.841	49.3	48.3	93	47.8	9	...	Cum.	
10.	N $\frac{1}{2}$ W.	6	c	...	29.843	50.0	49.0	93	48.2	10	...	Cum & Cumst	
11.	N $\frac{1}{2}$ W.	6	c	...	29.822	50.3	49.0	91	48.5	10	...	Cum & Cumst	Birds seen during the day were alba- tross, mollymawks, and mutton birds. Low send from N.W. Sp. gr. 1.02541.
Noon.	N $\frac{1}{2}$ W.	6	c	...	29.824	50.5	49.0	90	48.5	9	...	Cum & Cumst	
1.	N $\frac{1}{2}$ W.	6	c	...	29.822	51.3	50.3	93	48.0	9	Str.	Cum.	
2.	N $\frac{1}{2}$ W.	6	bcq	...	29.819	51.3	49.8	90	48.0	6	Cir str.	...	
3.	N $\frac{1}{2}$ W.	7	bcq	...	29.811	51.3	49.8	90	49.5	5	Cir str.	...	
4.	N $\frac{1}{2}$ W.	6	bcq	...	29.807	51.8	50.8	93	50.5	6	Cir.	Cum.	
5.	N $\frac{1}{2}$ W.	7	bc	...	29.799	51.3	50.0	91	50.0	9	...	Cum.	
6.	N $\frac{1}{2}$ W.	6	bc	3	29.800	51.3	50.0	91	50.0	9	...	Str.	
7.	N $\frac{1}{2}$ W.	6	bc	...	29.803	50.8	50.3	91	50.5	9	...	Cum & Cumst	
8.	N $\frac{1}{2}$ W.	6	bc	...	29.828	51.0	50.3	95	50.5	9	...	Cum & Cumst	
9.	N $\frac{1}{2}$ W.	6	c	...	29.836	51.3	49.8	90	50.5	9	...	Cum.	
10.	N $\frac{1}{2}$ W.	5	c	3	29.859	51.3	50.8	97	50.2	10	...	Cum.	
11.	N $\frac{1}{2}$ W.	5	bc	3	29.846	51.3	50.8	97	50.2	7	...	Cum.	
Midd.	N $\frac{1}{2}$ W.	5	bc	3	29.818	50.8	50.3	96	50.2	9	...	Cum str.	
Totals.	...	143	bcq	27	19936	5.3	223.1	89	212.1	208	Cir cum & Cir str.	Cum & Cum str.	
Mean.	N $\frac{1}{2}$ W.	6		3	29.831	50.2	49.3	94	48.8	9			

## MONDAY, 9TH.

1.	N $\frac{1}{2}$ W.	6	c	...	29.821	51.0	50.3	95	50.2	10	...	Cum.	At noon, lat. 48° 18' s. long. 130° 4' E. Temperature by self-registering thermo- meter, max. 54°, min. 50°. Current, s. 52° E. 33°. 1 A.M., send flying rapidly from N.W.
2.	N $\frac{1}{2}$ W.	6	c	...	29.817	50.9	50.3	96	50.2	10	...	Cum.	
3.	N $\frac{1}{2}$ W.	5	c	...	29.817	50.8	50.3	97	50.0	10	...	Cum.	
4.	N $\frac{1}{2}$ W.	4	c	...	29.834	50.8	50.3	97	50.0	9	...	Cum.	
5.	N $\frac{1}{2}$ W.	4	bc	...	29.818	50.8	50.3	97	50.0	6	...	Cum & Nb.	
6.	N. N. W.	3	c	...	29.876	50.8	50.5	98	50.0	9	...	Cum & Str.	
7.	N. N. W.	4	c	...	29.890	50.8	50.3	97	50.5	9	...	Cum str.	
8.	N. N. W.	3	...	...	29.909	51.0	50.8	99	50.5	...	Cir.	...	
9.	N. N. W.	2	c	...	29.915	51.5	50.8	95	50.5	10	...	Cum.	
10.	N. N. W.	2	c	...	29.926	51.5	51.0	97	50.2	10	...	Cum.	
11.	N. N. W.	2	c	...	29.902	52.3	51.5	91	50.5	10	...	Cum & Str.	Birds seen during the day were albatross and mutton birds. 1 P.M., breeze sprang up from S.E. Sp. gr. 1.02565.
Noon.	N. N. W.	1	c	...	29.898	52.3	51.5	94	50.0	9	...	Cum & Str.	
1.	...	...	...	1	...	...	...	...	...	9	...	Cum & Str.	
2.	E. S. E.	2	om	...	29.864	50.8	50.3	97	...	10	...	Str.	
3.	S. E.	1	ben	...	29.889	51.8	51.3	97	...	9	...	Cum & Str.	
4.	S. E.	2	bc	...	29.905	51.8	51.3	97	...	8	...	...	
5.	E.	1	oc	...	29.906	51.8	51.0	94	51.2	10	...	Cum & Nb.	
6.	E.	1	bc	1	29.916	51.8	51.0	94	51.5	6	...	Cum.	
7.	S. E.	1	bc	...	29.912	51.5	50.8	95	51.5	3	Cir.	Cum & Str.	
8.	S. E.	2	bc	...	29.912	51.0	50.0	93	51.5	3	Cir & Cumst.	...	
9.	S. E.	2	bc	1	29.916	50.8	49.8	93	51.2	3	Cir str.	...	
10.	S. E.	2	bc	1	29.919	51.0	50.3	95	51.2	3	Cir.	Cum & Str.	Slight aurora visible.
11.	E. S. E.	3	c	1	29.910	50.8	50.0	94	51.2	9	...	Cum.	
Midd.	E. S. E.	2	c	1	29.895	50.8	49.8	93	51.2	10	...	Cum.	
Totals.	...	61	om	6	20397	28.4	13.5	128	13.1	185	Cir & Str.	Cum & Str.	
Mean.	Variable.	3		1	29.887	51.2	50.6	96	50.6	8			

## TUESDAY, 10TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	EBS.	3	om	1	29.871	50.8	50.3	97	50.7	10	...	Str.	At noon, lat. 47° 25' S. long. 130° 22' E. Temperature by self-registering thermo- meter, max. 52° 5', min. 50'. Current, w. 6'.
2.	EBS.	4	om	...	29.849	50.8	50.3	97	51.0	10	...	Str.	
3.	EBS.	12	om	...	29.833	50.3	50.3	100	51.0	10	...	Cum. & Str.	
4.	EBS.	12	om	...	29.836	50.5	49.8	95	51.0	10	...	Str.	
5.	E.	1	om	...	29.842	50.8	50.5	98	51.0	10	...	Str.	Birds seen during the day were albatross, mollymawks, stormy petrel, and mutton birds. Sp. gr. 1°02564.
6.	E.	12	or	...	29.841	50.8	50.8	100	51.0	10	...	Str.	
7.	EBS.	12	oqm	...	29.842	50.8	50.8	100	51.5	10	...	Str.	
8.	EBS.	12	oqm	...	29.809	51.0	51.0	100	51.2	10	...	Str.	
9.	E.	12	em	...	29.814	51.5	51.3	99	51.2	10	...	Str.	
10.	EBS.	12	em	...	29.784	51.5	51.5	100	51.2	10	...	Str.	
11.	EBS.	3	em	...	29.761	51.5	51.5	100	51.2	10	...	Str.	
Noon.	EBS.	12	cmr	...	29.761	51.3	51.3	100	51.5	10	...	Str.	
1.	E.	3	orp	...	29.704	50.8	50.8	100	51.2	10	...	Cum.	
2.	E.	3	orp	...	29.674	50.5	50.5	100	51.2	10	...	Cum.	
3.	N. E.	3	orp	...	29.654	50.8	50.8	100	51.2	10	...	Cum.	
4.	N. E. E.	3	orp	...	29.640	50.8	50.8	100	51.2	10	...	Cum.	
5.	N. E. E.	3	omd	...	29.617	51.8	50.8	93	51.2	10	...	Str.	Passed large quantities of Pyrosoma and Medusae.
6.	N. E. E.	4	o	2	29.608	51.8	51.3	97	51.2	10	...	Str.	
7.	N. E.	4	odm	...	29.592	51.3	51.3	100	51.2	10	...	Str.	
8.	N. E.	4	om	...	29.586	51.3	51.3	100	51.2	10	...	Str.	
9.	N. E.	4	omd	...	29.553	51.8	51.8	100	51.5	10	...	Str.	
10.	N. E.	4	omd	...	29.510	51.8	51.8	100	51.5	10	...	Str.	
11.	N. E.	4	or	...	29.475	52.0	52.0	100	51.5	10	...	Str.	
Midd.	N. E.	4	cp	...	29.449	52.0	52.0	100	51.5	10	...	Cum str.	
Totals.	...	70	...	3	16905	28.3	24.6	216	29.1	240	...	Str. & Cum.	
Mean.	E. N. E.	3	orpm	1	29.704	51.2	51.0	99	51.2	10	...	Str. & Cum.	

## WEDNESDAY, 11TH.

1.	N. E.	4	omqp	...	29.420	51.8	51.8	100	51.0	10	...	Nimb.	At noon, lat. 46° 37' S. long. 129° 50' E. Temperature by self-registering thermo- meter, max. 55°, min. 50°. Current, w. 7'.
2.	N. E.	5	omqp	...	29.386	51.8	51.8	100	51.0	10	...	Nimb.	
3.	N. E.	4	omqp	...	29.361	52.3	52.3	100	51.0	10	...	Nimb.	
4.	N. E.	6	omqp	...	29.329	52.3	52.3	100	51.2	10	...	Nimb.	
5.	N. E.	3	omr	...	29.328	52.8	52.8	100	51.2	10	...	Str.	Birds seen during the day were albatross, mollymawks, mutton birds, and one carrion gull (Lestris). Sp. gr. 1°02569.
6.	N. N. E.	4	odm	...	29.316	52.8	52.8	100	51.2	10	...	Str.	
7.	N. E.	2	omqp	...	29.323	52.8	52.8	100	51.0	10	...	Str.	
8.	N. N. W.	2	omd	...	29.337	53.3	53.3	100	52.0	10	...	Str.	
9.	N. W.	3	om	...	29.341	52.8	52.8	100	52.2	10	...	Str.	
10.	N. W. W.	3	of	...	29.343	52.8	52.8	100	52.2	10	...	Str.	
11.	N. W. W.	4	om	...	29.347	53.3	53.0	98	52.2	10	...	Str.	
Noon.	N. W. W.	4	om	...	29.351	53.8	53.5	98	52.0	10	...	Str.	
1.	N. W. W.	4	om	...	29.365	53.5	53.5	100	52.2	10	...	Str.	
2.	N. W. W.	3	om	...	29.365	53.3	53.3	100	52.0	10	...	Str.	
3.	N. W. W.	3	om	...	29.385	53.3	53.3	100	51.7	10	...	Str.	Numerous Pyrosoma. Fog clearing.
4.	N. W. W.	3	om	...	29.397	53.0	53.0	100	51.7	10	...	Str.	
5.	N. W. W.	3	ouf	...	29.397	52.8	52.8	100	51.7	10	...	Nimb.	
6.	N. W. W.	3	of	...	29.401	52.8	52.8	100	51.7	10	...	Nimb.	
7.	N. W.	3	of	...	29.435	53.0	53.0	100	52.0	10	...	Str.	
8.	N. W.	4	of	...	29.445	...	...	...	52.0	10	...	Str.	
9.	N. W.	3	of	...	29.453	52.8	52.8	100	52.0	10	...	Str.	
10.	N. W.	4	of	...	29.457	52.8	52.8	100	52.0	10	...	Str.	
11.	N. W.	3	of	...	29.456	52.8	52.8	100	52.0	10	...	Str.	
Midd.	N. W.	4	om	...	29.455	52.8	52.8	100	52.2	10	...	Str.	
Totals.	...	83	...	...	9193	65.5	64.9	228	41.4	240	...	Nimb. & Str.	
Mean.	N. N. W.	3	omqp	...	29.383	52.7	52.8	100	51.7	10	...	Nimb. & Str.	

## THURSDAY, 12TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre, reduced to sea level and sea level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	N.W.	3	cm	2	29.474	52.8	52.8	100	52.2	10	...	Str.	At noon, lat. 41° 42' S. long. 132° 2' E. Temperature by self-registering thermo- meter, max. 53°, min. 50°. Current, E. 15°.
2.	N.W.	4	bcm	2	29.474	51.8	51.8	100	52.2	8	Cir cum.	Cum str.	
3.	N.W.	3	bcm	2	29.475	51.8	51.8	100	52.0	8	Cir cum.	Cum str.	
4.	N.W.	4	cm	...	29.471	51.8	51.8	100	52.0	10	...	Cum str.	
5.	N.W.	2	cm	...	29.485	51.8	51.8	100	52.2	10	...	Nimb.	
6.	N.W.	3	cm	1	29.503	52.8	52.3	97	52.2	10	...	Nimb.	
7.	W.	3	omp	...	29.517	52.3	52.3	100	52.2	10	...	Nimb.	
8.	S.W.	1	omp	...	29.533	52.3	52.0	98	52.2	10	...	Nimb.	
9.	S.W.	3	ocd	...	...	51.8	51.8	100	52.2	10	...	Cum.	
10.	S.W.	4	opd	...	29.563	51.8	51.3	97	53.0	10	...	Cum.	
11.	S.W.	4	opd	3	29.586	51.3	50.3	93	53.0	10	...	Cum.	
Noon.	swbw.	5	opd	...	29.583	50.8	49.8	93	53.2	9	...	Cum.	
1.	swbw.	4	be	...	29.583	51.3	49.5	87	...	8	...	Cum.	
2.	swbw.	5	bepd	...	29.592	51.0	49.5	90	53.0	8	...	Cum.	
3.	swbw.	4	opd	...	29.604	51.0	49.8	91	53.0	9	...	Cm.&Nb.	Birds seen during the day were numer- ous albatross and stormy petrel, and some mollynawks and mutton birds. Swell from W. Sp. gr. 1.02575.
4.	swbw.	5	opd	...	29.616	51.0	50.0	93	53.0	10	...	Cm.&Nb.	
5.	swbw.	4	be	...	29.646	51.3	49.8	90	54.5	8	...	Cum str.	
6.	swbw.	5	bep	...	29.662	50.8	49.8	93	54.7	8	...	Cum str.	
7.	S.W.	4	be	...	29.680	50.8	49.8	93	54.2	9	...	Cm.&Str.	
8.	S.W.	5	ep	...	29.700	50.8	49.3	90	54.0	5	...	Cum.	
9.	S.W.	4	bepd	3	29.684	50.3	48.8	90	54.0	8	...	Cum.	
10.	S.W.	5	bepd	...	29.664	50.8	48.8	86	53.7	6	...	Cum.	
11.	W.S.W.	3	bep	...	29.692	49.8	48.8	93	54.0	8	...	Cum.	
Midt.	S.W.	4	be	3	29.674	49.8	48.8	93	54.0	6	...	Cum.	
Totals.	...	91	empy	18	13461	31.8	12.5	107	70.7	208	Cir cum.	Cum.,	
Mean.	W.S.	4	...	2	29.585	51.3	50.5	94	53.1	9	Cir cum.	Cum str., & Nimb.	

## FRIDAY, 13TH.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre, reduced to sea level and sea level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	S.W.	4	bepd	...	29.686	50.8	48.8	86	54.0	6	...	Cum.	At noon, lat. 42° 42' S. long. 134 10' E. Temperature by self-registering thermo- meter, max. 55°, min. 50°. Current, S. 57° E. 13°.
2.	S.W.	4	be	...	29.694	50.5	48.0	83	53.7	8	...	Cum.	
3.	S.W.	4	ocp	...	29.698	50.8	48.5	85	53.7	10	...	Cum.	
4.	S.W.	4	c	...	29.703	50.8	47.3	77	53.7	9	...	Cum.	
5.	S.W.	4	c	...	29.707	50.8	47.8	80	53.5	10	Cir.	Cum.	
6.	S.W.	4	c	...	29.733	51.3	48.8	83	53.5	8	...	Cum.	
7.	S.W.	4	be	...	29.737	52.3	48.8	78	53.7	8	...	Cm.&Str.	
8.	W.S.W.	4	be	...	29.775	52.3	49.8	83	54.0	8	...	Cm.&Str.	
9.	W.S.	3	c	...	29.768	52.0	49.8	85	54.7	9	Str.	Cum.	
10.	swbw.	4	be	...	29.748	52.3	49.8	83	54.7	5	Str.	Cum.	
11.	S.W.	4	be	...	29.759	51.8	49.3	83	54.7	9	Str.	Cum.	
Noon.	swbw.	4	bemp	...	29.758	52.0	49.8	85	54.7	5	Str.	Cum.	
1.	S.W.	3	bepd	4	...	...	...	...	51.5	...	...	...	
2.	S.W.	5	bepd	...	29.735	52.3	49.8	83	54.5	5	...	Cum.	
3.	S.W.	4	be	...	29.719	52.3	50.0	85	54.5	7	Cir.	Cum.	
4.	swbs.	5	be	...	29.735	...	...	...	54.5	6	...	Cum.	
5.	swbs.	4	be	...	29.745	53.5	49.3	74	54.5	3	Cir.	Cum.	
6.	swbs.	4	be	3	29.754	51.8	48.3	77	...	7	...	Cum.	
7.	S.W.	3	be	3	29.756	51.3	48.8	83	56.5	6	...	Cum.	
8.	S.W.	3	be	3	29.771	51.3	48.8	83	57.0	5	Cir.	Cum.	
9.	S.W.	3	be	...	29.772	50.8	48.5	84	57.0	6	...	Cum.	
10.	S.W.	3	be	...	29.769	51.0	49.3	88	57.5	6	...	Cm.&Nb.	Birds seen during the day were alba- tross, mutton birds, mollynawks, and Cape hens. Sp. gr. 1.02570.
11.	S.W.	3	bep	...	29.764	51.3	49.8	90	57.5	9	...	Cm.&Nb.	
Midt.	S.W.	4	bep	...	29.767	51.3	49.3	86	57.5	6	...	Cm.&Nb.	
Totals.	...	91	bep	13	17053	31.6	198.4	64	114.1	161	Cir str.	Cum. & Nimb.	
Mean.	S.W.	4	...	3	29.741	51.6	49.0	83	55.0	7	...	...	

## SATURDAY, 14th MARCH 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	ssw by w.	5	bcepd	3	29.761	50.3	49.3	93	57.0	7	...	Cm. & Cmst.	At noon, lat. 41° 15' s. long. 136° 48' E. Temperature by self-registering thermometer, max. 55°, min. 49°. Current, S. 10° E. 9'.
2.	s by w.	4	bcepd	...	29.759	50.8	49.8	93	57.0	9	...	Cm. & Cmst.	
3.	sw by s.	5	bcepd	...	29.757	50.8	50.3	97	57.0	3	...	Cm. & Cmst.	
4.	s by w.	3	bcepd	3	29.758	51.3	49.8	90	57.0	9	...	Cm. & Cmst.	
5.	sw by s.	5	bc	...	29.768	51.8	49.5	85	57.0	3	...	Cm. & Cmst.	
6.	sw by w.	4	bc	...	29.791	51.8	49.8	86	...	6	...	Cum.	
7.	sw by w.	5	bc	3	29.810	52.3	49.8	83	56.5	5	...	Cum.	
8.	sw by w.	5	bc	3	29.822	52.8	51.8	93	56.5	7	...	Cm. & Nb.	
9.	sw by w.	5	bc	3	29.830	52.8	50.3	83	57.0	5	...	Cir.	
10.	sw by w.	5	bc	3	29.834	53.8	53.5	98	57.0	5	Cir cum.	Str.	
Noon.	sw by w.	5	bep	3	29.836	52.3	51.3	93	57.5	5	...	Str.	
1.	sw by w.	5	bc	3	29.828	52.8	50.8	86	58.0	5	...	Cum str.	Birds seen during the day were albatross, mutton birds, Cape hens. Sp. gr. 1-02590.
2.	sw by w.	5	bep	...	29.825	53.3	50.8	83	58.0	6	Cir cum.	Cum.	
3.	sw by w.	5	bep	...	29.827	54.3	51.0	78	58.5	7	...	Cum.	
4.	sw by w.	5	eq	...	29.827	54.3	51.3	80	59.5	8	...	Cum.	
5.	sw by w.	5	eq	...	29.836	53.0	51.5	90	59.5	9	...	Cum.	
6.	sw by w.	4	bepd	...	29.855	53.3	51.8	90	59.5	8	...	Cum.	
7.	sw by w.	5	bc	4	29.861	53.8	51.8	86	59.0	9	...	Cm. & Nb.	
8.	sw by w.	5	bc	...	29.866	54.3	51.5	81	58.5	8	...	Cum.	
9.	sw by w.	5	bc	...	29.932	54.3	51.8	83	58.2	6	...	Cm. & Nb.	
10.	sw by w.	5	bc	...	29.932	54.3	52.3	86	58.0	5	...	Cm. & Nb.	
11.	sw by s.	5	bc	...	29.934	53.8	51.5	85	57.5	6	...	Cum.	
Midt.	sw by s.	4	bepd	3	29.938	53.8	51.3	83	57.5	5	Cir str.	Cum.	
	sw by s.	5	bepd	3	29.949	52.8	52.3	97	57.5	7	Cir.	Cum.	
Totals.	...	114	bepd	34	29.156	68.9	24.9	182	179.7	153	Cir str.	Cum & Cum str.	
Mean.	sw by s.	5	bepd	3	29.840	52.9	51.1	88	57.8	6			

## SUNDAY, 15th.

1.	sw by w.	3	bc	3	29.959	53.0	51.3	88	57.0	5	...	Cum.	At noon, lat. 39° 45' s. long. 140° 40' E. Temperature by self-registering thermometer, max. 57°, min. 52°. Current, S. 33° E. 11'.
2.	sw by w.	4	eq	3	29.956	54.0	51.0	80	57.2	6	...	Cum.	
3.	sw by w.	4	eq	3	29.958	54.0	50.5	77	58.0	8	...	Cum.	
4.	sw by w.	4	eq	3	29.967	53.8	50.8	80	58.0	8	...	Cum.	
5.	sw by w.	3	c	...	29.988	53.8	50.5	80	58.0	9	...	Cum.	
6.	sw by w.	4	c	...	30.016	53.8	50.8	80	58.0	10	...	Cum.	
7.	sw by w.	3	c	12	30.033	54.3	51.3	80	58.5	9	...	Cum.	
8.	sw by w.	4	c	...	30.056	55.3	51.8	79	58.7	10	...	Cum.	
9.	sw by w.	3	c	...	30.080	55.3	51.5	78	58.7	10	...	Cum.	
10.	sw by w.	4	c	...	30.088	55.8	51.8	75	...	9	...	Cum.	
11.	sw by w.	3	c	...	30.093	56.3	51.8	73	60.2	10	...	Cum.	
Noon.	sw by w.	2	c	...	30.098	56.5	51.8	72	60.2	10	...	Cum.	Birds seen during the day were albatross, mutton birds, stormy petrel. Several porpoises seen. Sp. gr. 1-02625.
1.	sw by w.	3	c	2	30.103	56.5	52.8	77	59.2	10	...	Cum str.	
2.	sw by w.	3	c	...	30.105	56.5	52.3	74	59.2	9	...	Cum str.	
3.	sw by w.	3	c	...	30.105	56.5	52.3	74	60.0	9	...	Cum str.	
4.	sw by w.	3	bc	2	...	56.5	52.8	75	...	8	...	Cum str.	
5.	sw by w.	2	bc	...	30.119	56.3	52.3	75	59.5	8	...	Cm. & Cmst.	
6.	sw by w.	2	bc	...	30.146	56.8	52.8	75	59.5	8	...	Cm. & Cmst.	
7.	sw by w.	2	bc	...	30.141	56.3	53.3	81	58.5	9	...	Cum.	
8.	sw by s.	1	bc	...	30.156	56.8	53.8	81	59.0	8	...	Cum.	
9.	sw by w.	2	bc	...	30.161	56.3	53.3	81	59.0	8	...	Cum.	
10.	sw by s.	1	bc	...	30.172	56.3	52.8	77	59.0	8	...	Cum.	
11.	sw by w.	2	bc	...	30.176	54.8	52.8	87	59.0	8	...	Cum.	
Midt.	sw by w.	3	bc	...	30.166	55.5	52.5	81	59.0	8	...	Cum.	
Totals.	...	69	bc	18	18.43	131.0	49.0	201	192.9	207	...	Cum & Cum str.	
Mean.	s.w.	3	bc	3	30.080	55.5	52.0	78	58.8	9			

MONDAY, 16TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometre- reduced to 22° and Sea Level.	Thermometer.		Humidity. Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
1.	SW $\frac{1}{2}$ W.	3	bc	...	30.152	56.3	52.8	78	58.5	8	...	Cum.	At noon, lat. 39° 22' s. long. 142° 27' E. Temperature by self-registering thermo- meter, max. 62°, min. 54° 5. Current, N. 80° E. 12'.
2.	WN $\frac{1}{2}$ N.	0	bc	...	30.147	56.3	52.8	78	58.5	7	...	Cum str.	
3.	W $\frac{1}{2}$ S.	1	bc	...	30.141	56.3	52.8	78	58.2	7	...	Cum str.	
4.	WN $\frac{1}{2}$ S.	0	bc	...	30.143	56.3	53.8	84	58.0	6	...	Cum str.	
5.	SW $\frac{1}{2}$ W.	1	bc	...	30.151	55.8	53.0	82	59.0	8	...	Cum str.	
6.	NW $\frac{1}{2}$ N.	2	bc	...	30.164	55.8	53.8	87	60.0	6	Cir str.	Cum str.	
7.	NW $\frac{1}{2}$ N.	1	bc	...	30.184	55.8	52.8	81	60.5	7	Cir str.	Cum str.	
8.	NW $\frac{1}{2}$ N.	1	bc	...	30.192	56.8	53.8	81	60.5	3	...	Cum str.	
9.	N $\frac{1}{2}$ W.	1	bc	...	30.199	58.3	54.8	78	60.0	7	...	Cum.	
10.	N $\frac{1}{2}$ W.	1	c	0	30.205	58.8	54.8	76	...	10	...	Cum.	
11.	N $\frac{1}{2}$ W.	1	c	...	30.197	58.8	54.8	76	60.5	9	...	Cum.	
Noon.													Birds seen during the day were molly- mawks and albatross.  Sp. gr. 1-02638. 0.30. P.M., observed land on port bow. Passed some seaweed.
1.	NE $\frac{1}{2}$ E.	1	bc	...	30.168	60.3	55.3	71	62.0	5	...	Cm&Cmst	
2.	NE $\frac{1}{2}$ E.	2	bcy	...	30.168	61.5	56.3	71	62.0	6	...	Cm&Cmst	
3.	NE $\frac{1}{2}$ E.	1	bcy	...	30.156	61.5	56.0	70	62.0	5	Cir.	Cum str.	
4.	NE $\frac{1}{2}$ E.	2	bcy	...	30.147	61.8	56.3	70	63.0	6	Cir.	Cm&Cmst	
5.	NE $\frac{1}{2}$ E.	1	bcy	...	30.142	60.3	55.8	73	63.0	4	Cir.	Cm&Cmst	
6.	NE $\frac{1}{2}$ E.	1	bcy	...	30.146	59.8	55.5	75	63.0	4	Cir.	Str.	
7.	Calm.	0	bc	...	30.139	59.3	55.3	76	63.0	3	Cir str.	Str.	
8.	Calm.	0	bc	...	30.142	59.3	55.3	76	63.0	1	...	Str.	
9.	E $\frac{1}{2}$ S.	1	bc	...	30.131	59.3	54.8	74	63.0	2	...	Cum.	
10.	EN $\frac{1}{2}$ N.	1	bc	...	30.118	58.8	54.8	76	63.0	3	...	Cum.	
11.	EN $\frac{1}{2}$ N.	2	bc	...	30.106	59.8	56.3	79	63.2	6	...	Cum.	
Midt.	NE $\frac{1}{2}$ E.	1	bc	...	30.072	59.8	55.8	76	63.2	2	...	Cum.	
Totals.	...	27	bcy	...	3695	206.6	113.0	161	28.1	133	Cir str.	Cum. & Cum str.	
Mean.	Variable.	1		0	30.154	58.6	54.7	77	61.2	6			

TUESDAY, 17TH.

1.	NE $\frac{1}{2}$ E.	1	bc	...	30.078	59.3	55.3	76	63.0	2	...	Cum.	At Melbourne. Temperature by self-registering thermo- meter, max. 74°, min. 58°.
2.	NE $\frac{1}{2}$ E.	1	bc	...	30.048	59.5	56.3	81	62.7	3	...	Cum.	
3.	NE $\frac{1}{2}$ E.	1	bc	...	30.040	59.5	56.5	82	62.7	2	...	Cum str.	
4.	NE $\frac{1}{2}$ E.	1	bc	...	30.024	59.8	57.3	85	62.7	7	...	Cum.	
5.	NE $\frac{1}{2}$ E.	1	bc	...	30.038	59.8	57.3	85	...	3	Cir.	Str.	
6.	N $\frac{1}{2}$ E.	2	bc	...	30.028	59.5	56.8	84	63.0	4	Cir.	Cum.	
7.	N $\frac{1}{2}$ E.	1	bc	1	30.040	58.8	56.8	88	63.0	3	Cir.	Cum.	
8.	N $\frac{1}{2}$ E.	2	bc	...	30.051	58.8	56.8	88	63.0	4	Cir.	Cum.	
9.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	N $\frac{1}{2}$ E.	1	bc	...	30.035	62.3	59.3	82	...	6	Cir str.	Cum.	
11.	...	...	...	...	...	...	...	...	65.7	...	...	...	
Noon.													8 A.M., passed Port Phillip heads.  2 P.M., anchored in Hobson's bay.
1.	NE $\frac{1}{2}$ E.	2	bcm	...	30.011	67.3	61.3	68	65.7	8	Str.	Cum.	
2.	NE $\frac{1}{2}$ E.	1	bcm	...	30.007	68.3	62.3	68	...	6	Str.	Cum.	
3.	NE $\frac{1}{2}$ E.	2	bcm	...	29.997	70.0	65.0	73	...	6	Str.	Cum.	
4.	SE $\frac{1}{2}$ E.	1	bcm	...	29.977	72.3	66.0	68	...	6	Str.	Cum.	
5.	SE $\frac{1}{2}$ E.	1	bc	...	29.961	71.8	65.3	67	...	6	Str.	Cum.	
6.	SE $\frac{1}{2}$ E.	2	bc	...	...	68.3	65.5	84	...	6	...	Cm&Cmst	
7.	SE $\frac{1}{2}$ E.	3	bc	...	29.985	65.8	61.8	78	63.0	4	...	Cm&Cmst	
8.	SE $\frac{1}{2}$ E.	2	bc	...	29.993	65.3	60.8	76	...	6	...	Cm&Str.	
9.	SE $\frac{1}{2}$ E.	1	bc	...	30.015	65.8	60.8	73	...	6	...	Cm&Str.	
10.	...	...	...	...	...	63.8	60.8	82	...	...	...	...	
11.	...	...	...	...	...	...	...	...	...	...	...	...	
Midt.	S $\frac{1}{2}$ W.	2	bcp	...	30.014	60.8	58.5	87	...	9	Str.	Cum.	
Totals.	...	29	bcm	...	362	13406	1.3	1657	34.5	103	Cir & Str.	Cum. & Cum str.	
Mean.	Variable.	1		...	30.018	63.8	60.1	79	63.4	5			

## WEDNESDAY, 18TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw $\frac{1}{2}$ w.	12	bep	...	29.998	60.3	58.8	91	...	5	...	Cum.	At Melbourne. Temperature by self-registering thermo- meter, max. 67°5, min. 56°5.
4.	w $\frac{1}{2}$ N.	0	bc	...	29.990	58.8	56.8	88	...	7	...	Cum.	
6.	w $\frac{1}{2}$ N.	1	bc	...	30.007	58.3	56.3	87	56.7	8	...	Cum & Cum str.	
8.	w $\frac{1}{2}$ N.	1	bc	...	30.009	60.8	57.0	78	...	3	...	Cum.	
10.	w $\frac{1}{2}$ N.	2	bc	...	30.012	63.3	57.8	70	...	6	...	Cum & Str.	
Noon.	w $\frac{1}{2}$ N.	2	bc	...	30.037	62.8	57.5	71	...	7	...	Cum & Str.	
2.	w $\frac{1}{2}$ N.	2	bc	...	29.962	66.0	58.3	61	...	8	Cir str.	Cum.	
4.	w $\frac{1}{2}$ N.	1	bc	...	29.965	65.8	57.8	60	...	8	Cir str.	Cum.	
6.	w $\frac{1}{2}$ N.	2	bc	...	29.975	64.8	57.8	63	66.5	9	Str.	Cum.	
8.	w $\frac{1}{2}$ N.	1	bc	...	29.996	62.3	58.3	77	...	...	Str.	Cum.	
10.	w $\frac{1}{2}$ N.	2	bc	...	30.005	59.8	56.8	82	...	2	...	Cum.	
Midt.	w $\frac{1}{2}$ N.	1	bc	...	30.014	58.8	55.8	82	...	2	Str.	Cum.	
Totals.	...	17	...	...	1197.0	21.8	89.0	910	123.2	65	Cir str.	Cum & Str.	
Mean.	Westly.	1	bc	...	29.997	61.8	57.4	76	61.6	6			

## THURSDAY, 19TH.

2.	w $\frac{1}{2}$ N.	1	bc	...	29.999	57.8	55.8	87	...	4	Str.	Cum.	At Melbourne. Temperature by self-registering thermo- meter, max. 72°0, min. 54°0.
4.	w $\frac{1}{2}$ N.	2	bc	...	29.997	57.3	54.8	84	...	1	Str.	Cum.	
6.	sw $\frac{1}{2}$ N.	1	bc	...	30.022	55.8	54.8	93	...	5	Cir.	Cum.	
8.	sw $\frac{1}{2}$ w.	1	bc	...	30.050	59.8	56.8	82	...	...	Cir.	...	
10.	sw $\frac{1}{2}$ w.	1	bc	...	30.072	68.8	61.8	64	...	8	...	Cum.	
Noon.	sw $\frac{1}{2}$ w.	1	bc	...	30.057	65.5	60.8	74	...	9	...	Cum.	
2.	se $\frac{1}{2}$ E.	1	bc	...	30.020	67.8	62.3	71	...	8	...	Cum.	
4.	se $\frac{1}{2}$ E.	1	bc	...	30.003	70.3	63.5	66	...	7	...	Cum.	
6.	sw $\frac{1}{2}$ N.	1	bc	...	29.993	67.8	61.8	68	57.0	8	...	Cum.	
8.	sw $\frac{1}{2}$ N.	1	bc	...	29.993	64.8	61.8	83	...	8	...	Cum.	
10.	...	...	bc	...	...	63.8	61.0	83	...	8	...	Cum.	
Midt.	Calm.	0	bc	...	29.999	61.3	56.8	75	...	8	...	Cum.	
Totals.	...	11	bc	...	295	769.8	112.0	930	...	74	Cir str.	Cum.	
Mean.	Vble.	1	...	...	30.019	63.4	59.3	78	57.0	7			

## FRIDAY, 20TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.956	63.5	55.8	60	...	2	...	Cum.	At Melbourne. Temperature by self-registering thermometer, max. 75.5, min. 55.5.
4.	Calm.	0	bc	...	29.949	57.8	54.8	81	...	2	...	Cum.	
6.	N $\frac{1}{2}$ E.	2	bc	...	29.946	56.3	54.0	85	63.7	6	Cir.	Cm.&Str.	
8.	NNE $\frac{1}{2}$ E.	1	bc	...	29.952	59.8	57.8	88	...	7	...	Cm.&Cm.	
10.	N $\frac{1}{2}$ W.	3	bcq	...	29.913	71.8	62.8	57	...	5	...	Cum.	
Noon.	N $\frac{1}{2}$ W.	6	bcq	...	29.889	73.5	63.8	56	...	7	...	Cm.&Cr.cm	
2.	N $\frac{1}{2}$ W.	4	bcq	...	29.839	73.5	63.5	54	...	6	...	Cm.&Cr.cm	
4.	N $\frac{1}{2}$ W.	1	bc	...	29.821	71.8	63.8	61	...	7	...	Cm.&Str.	
6.	N $\frac{1}{2}$ E.	1	bc	...	29.778	70.8	62.8	61	65.5	8	...	Str.	
8.	N $\frac{1}{2}$ E.	0	bc	...	29.687	69.8	62.8	65	...	7	Cir str.	...	
10.	NNE $\frac{1}{2}$ E.	1	c	...	29.680	67.8	61.8	68	...	9	...	Cm.&Nb.	
Milt.	NNE $\frac{1}{2}$ E.	2	c	...	29.793	67.8	62.8	73	...	7	...	Cm.&Nb.	
Totals.	...	21	bcq	...	10203	804.2	6.5	809	9.2	73	Cir cum.	Cum., Str., & Nimb.	
Mean.	N $\frac{1}{2}$ E.	2		...	29.850	67.0	60.5	67	64.6	6	Cir str.		

## SATURDAY, 21st

2.	NW $\frac{1}{2}$ N.	1	c	...	29.793	68.3	62.8	71	...	8	...	Cum.	At Melbourne. Temperature by self-registering thermometer, max. 73°, min. 64.5.
4.	NW $\frac{1}{2}$ N.	2	c	...	29.793	66.8	63.0	77	...	7	...	Cum.	
6.	...	...	c	...	...	65.8	62.8	83	64.3	8	...	Cum.	
8.	N $\frac{1}{2}$ W.	1	cp	...	29.872	66.5	63.8	84	...	7	...	Cum.	
10.	NE $\frac{1}{2}$ E.	1	c	...	29.859	66.8	63.8	83	...	9	...	Cum str.	
Noon.	NE $\frac{1}{2}$ E.	2	bc	...	29.829	67.8	64.8	83	...	7	...	Cum str.	
2.	SE $\frac{1}{2}$ S.	1	...	...	29.776	70.8	68.3	85	...	...	...	...	
4.	SE $\frac{1}{2}$ S.	1	bc	...	29.774	69.8	67.8	88	...	7	Cir.	Cum.	
6.	SE $\frac{1}{2}$ S.	3	bc	...	29.822	66.8	64.8	88	65	7	Cir.	Cum.	
8.	SE $\frac{1}{2}$ E.	3	cl	...	29.860	65.8	63.8	88	...	8	...	Cum.	
10.	SE $\frac{1}{2}$ E.	2	cl	...	29.898	65.8	62.8	83	...	9	...	Cum.	
Milt.	SE $\frac{1}{2}$ E.	2	cr	...	29.918	63.8	62.3	91	...	9	...	Cum.	
Totals.	...	19	bcpl	...	9194	84.8	50.8	44	9.3	86	Cir.	Cum. & Cum str.	
Mean.	Vble.	2		...	29.836	67.1	64.2	84	64.6	8			

## SUNDAY, 22d.

2.	SSW $\frac{1}{2}$ W.	2	opp	...	29.920	61.8	60.8	94	...	10	...	Cum.	At Melbourne. Temperature by self-registering thermometer, max. 62°, min. 58.2.
4.	SW $\frac{1}{2}$ W.	2	bc	...	29.931	60.8	59.8	94	...	7	...	Cum.	
6.	W $\frac{1}{2}$ S.	2	op	...	29.921	60.8	59.8	94	59.0	10	...	Cum.	
8.	W $\frac{1}{2}$ S.	2	op	...	29.922	59.8	59.3	97	...	10	...	Cum.	
10.	W $\frac{1}{2}$ S.	2	o	...	29.923	60.3	60.0	98	...	10	...	Cum.	
Noon.	W $\frac{1}{2}$ N.	1	o	...	29.908	60.8	59.8	94	...	10	...	Cum.	
2.	SW $\frac{1}{2}$ S.	3	op	...	29.886	59.8	58.8	94	...	10	...	Cum.	
4.	SW $\frac{1}{2}$ W.	2	bcpl	...	29.884	60.3	59.3	94	...	8	...	Cum.	
6.	SE $\frac{1}{2}$ E.	2	c	...	29.895	58.8	57.8	94	59.0	9	...	Cum.	
8.	N $\frac{1}{2}$ E.	1	c	...	29.897	59.8	59.0	95	...	10	...	Cum.	
10.	NW $\frac{1}{2}$ N.	1	op	...	29.891	57.8	56.8	93	...	10	...	Cum.	
Milt.	SW $\frac{1}{2}$ W.	1	op	...	29.897	56.3	55.8	97	...	10	...	Cum.	
Totals.	...	21	cppl	...	10875	717.1	107.0	58	...	114	...	Cum.	
Mean.	Vble.	2		...	29.906	59.8	58.9	95	59.0	9			

MONDAY, 23<sup>d</sup> MARCH 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.				Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.						Upper.	Lower.	
2.	xwbyw	2	oep	...	29.928	55.8	55.8	100	...	10	...	...	Cum.	...	At Melbourne. Temperature by self-registering thermometer, max. 65°, min. 51°.
4.	xwbyw	3	oep	...	29.937	54.8	54.8	100	...	10	...	...	Cum.	...	
6.	w.N.	2	be	...	29.956	54.8	54.8	100	64.5	9	...	...	Cum.	...	
8.	w.N.	2	be	...	30.017	56.3	55.3	93	...	9	...	...	Cum.	...	
10.	w.N.	3	be	...	30.037	61.8	58.3	80	...	8	...	...	Cum str.	...	
Noon.	sswbyw.	3	be	...	30.046	62.0	59.3	84	...	8	...	...	Cum str.	...	
2.	sswbyw.	3	be	...	30.039	60.5	57.3	81	...	8	...	...	Cum str.	...	
4.	sswbyw.	3	be	...	30.055	61.8	57.5	76	...	6	...	...	Cum str.	...	
6.	sbyw.	3	be	...	30.075	59.8	57.0	83	63.0	6	...	...	Cum str.	...	
8.	sbyw.	7	beq	...	30.074	58.8	54.8	76	...	4	...	...	Cum str.	...	
10.	wby.s.	3	e	...	30.162	55.3	53.5	88	...	8	...	...	Cum str.	...	
Midt.	wby.s.	2	e	...	30.161	53.8	52.5	91	...	8	...	...	Cum str.	...	
Totals.	...	36	beq	...	487	95.5	70.9	1052	7.5	94	...	...	Cum. & Cum str.	...	
Mean.	w.s.w.	3		...	30.041	57.9	55.9	88	63.7	8	...	...	Cum. & Cum str.	...	

TUESDAY, 24<sup>TH</sup>.

2.	sbyw.	3	e	...	30.166	55.8	52.8	81	...	8	...	...	Cum.	...	At Melbourne. Temperature by self-registering thermometer, max. 70°, min. 52°.
4.	sbyw.	2	be	...	30.157	55.8	52.0	76	...	7	...	...	Cum.	...	
6.	sbyw.	2	beq	...	30.234	55.8	52.8	81	63.0	7	...	...	Cum str.	...	
8.	sbyw.	3	be	...	30.246	57.8	53.8	76	...	5	...	...	Cum str.	...	
10.	sbyw.	3	be	...	30.291	60.3	55.8	74	...	5	...	...	Cum str.	...	
Noon.	sbyw.	3	be	...	30.286	63.8	58.5	71	...	6	...	...	Cum str.	...	
2.	sbyw.	1	be	...	30.279	66.8	60.3	66	...	4	...	...	Cum str.	...	
4.	sbyw.	3	be	...	30.282	65.8	60.0	69	...	4	...	...	Cum str.	...	
6.	sbyw.	5	beq	...	30.286	60.8	55.8	72	...	6	...	...	Cum str.	...	
8.	sbyw.	3	beq	...	30.349	59.3	55.3	76	...	6	...	...	Cir.	...	
10.	sbyw.	2	be	...	30.370	57.8	53.8	76	...	7	...	...	Cum str.	...	
Midt.	sbyw.	2	be	...	30.373	56.8	53.8	81	...	6	...	...	Cum.	...	
Totals.	...	32	beq	...	3313	716.6	64.7	899	...	71	...	...	Cir.	Cum. & Cum str.	
Mean.	sbyw.	3		...	30.276	59.7	55.4	75	63.0	6	...	...	Cir.	Cum. & Cum str.	

WEDNESDAY, 25<sup>TH</sup>.

2.	sbyw.	3	beq	...	30.403	56.3	54.3	87	...	5	...	...	Cum.	...	At Melbourne. Temperature by self-registering thermometer, max. 73°, min. 52°.
4.	sbyw.	5	beq	...	30.386	56.0	54.8	91	...	6	...	...	Cum.	...	
6.	sbyw.	2	be	...	30.350	53.8	52.8	93	62.0	3	...	...	Cum & Str.	...	
8.	sbyw.	2	be	...	30.352	55.8	54.8	93	...	2	...	...	Cum & Str.	...	
10.	Calm.	0	be	...	30.345	63.8	59.8	77	...	2	Cir cum.	...	...	...	
Noon.	w.N.	1	be	...	30.338	67.3	62.3	73	...	4	...	...	Cum & Str.	...	
2.	w.N.	1	be	...	30.275	68.8	64.8	78	...	5	...	...	Cum & Str.	...	
4.	w.N.	4	be	...	30.248	70.3	65.3	73	...	6	...	...	Cum & Str.	...	
6.	sbyw.	3	be	...	30.257	65.3	62.8	83	63.0	5	...	...	Cum & Str.	...	
8.	sbyw.	5	be	...	30.278	62.8	60.8	88	...	3	...	...	Cum & Str.	...	
10.	sbyw.	3	be	...	30.287	62.3	59.3	82	...	5	...	...	Cum.	...	
Midt.	sbyw.	1	be	...	30.285	61.8	58.8	82	...	6	...	...	Cum.	...	
Totals.	...	30	beq	...	3804	744.3	110.6	1000	...	52	...	...	Cir cum.	Cum. & Str.	
Mean.	Vble.	2		...	30.317	62.0	59.2	83	62.5	4	...	...	Cir cum.	Cum. & Str.	

## THURSDAY, 26TH MARCH 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	xw <sup>by</sup> w	1	og	...	30.264	60.8	59.8	94	...	10	...	Cum.		At Melbourne. Temperature by self-registering thermometer, max. 75°, min. 56°.5.
4.	xw <sup>by</sup> w	1	og	...	30.246	60.5	59.5	94	...	9	...	Cum.		
6.	Calm.	0	bc	...	30.214	61.8	60.8	94	63.0	5	...	Cir.	Cum.	
8.	Calm.	0	bc	...	30.214	61.3	59.8	91	...	9	...	Cir str.	Cum.	
10.	Calm.	0	bc	...	30.185	66.3	63.3	83	...	7	...	Cir str.	Cum.	
Noon.	Calm.	0	bc	...	30.178	70.3	66.8	81	...	9	...	Cir str.	Cum.	
2.	NNE <sup>by</sup> E.	1	c	...	30.051	75.3	68.3	66	...	9	...	Cir cum.	Cum.	
4.	NNE <sup>by</sup> E.	2	o	...	30.019	72.8	67.3	72	...	10	...	...	Cum.	
6.	NNE <sup>by</sup> E.	1	bc	...	30.013	71.3	68.3	83	63.5	9	...	Cir cum.	Cum.	
8.	Calm.	0	bc	...	30.015	69.8	68.3	91	...	8	...	...	Cum.	
10.	Calm.	0	bc	...	30.026	67.8	66.3	91	...	9	...	Cir cum.	Cum.	
Midt.	Calm.	0	or	...	30.027	67.3	65.8	91	...	9	...	...	Cum.	
Totals.	...	6	bc	...	1452	85.3	54.3	1031	...	103	...	Cir cum. & Cir str.	Cum.	
Mean.	Vble.	1		...	30.121	67.1	64.5	86	63.2	9	...	...	...	

## FRIDAY, 27TH.

2.	Calm.	0	ocr	...	29.997	67.3	65.8	91	...	10	...	Cum.		At Melbourne. Temperature by self-registering thermometer, max. 68°.5, min. 62°.0.
4.	N <sup>by</sup> E.	2	ocr	...	29.998	66.8	65.8	94	...	10	...	Cum.		
6.	N <sup>by</sup> E.	1	or	...	29.985	66.3	64.8	91	63.0	10	...	Cum. & N.b.		
8.	N <sup>by</sup> E.	1	or	...	29.991	65.8	64.8	94	...	10	...	Cum.		
10.	Calm.	0	oe	...	29.986	67.3	66.3	94	...	10	...	Cum.		
Noon.	Calm.	0	c	...	29.980	67.8	66.8	94	...	10	...	Cum str.		
2.	SE <sup>by</sup> S.	2	cd	...	29.968	65.3	64.8	97	...	9	...	Cum str.		
4.	SE <sup>by</sup> S.	4	cd	...	29.950	64.3	63.8	97	...	9	...	Cum str.		
6.	SE <sup>by</sup> S.	3	ocr	...	29.943	64.8	63.8	94	63.0	10	...	Cum str.		
8.	SE <sup>by</sup> S.	4	ocr	...	30.008	64.8	64.8	100	...	10	...	Cum str.		
10.	S <sup>by</sup> W.	3	ocr	...	30.003	64.8	64.3	97	...	10	...	Cum str.		
Midt.	S <sup>by</sup> W.	4	ocr	...	30.005	64.8	64.8	100	...	10	...	Cum.		
Totals.	...	24	ocr	...	11814	70.1	60.6	63	...	118	...	Cum. & Cum str.		
Mean.	Vble.	2		...	29.984	65.8	65.0	95	63.0	10	...	...	...	

## SATURDAY, 28TH.

2.	sw <sup>by</sup> w.	6	orl	...	30.022	59.3	58.8	97	...	10	...	Cum.		At Melbourne. Temperature by self-registering thermometer, max. 62°.5, min. 57°.0.
4.	sw <sup>by</sup> w.	4	or	...	30.022	58.8	58.8	100	...	10	...	Cum.		
6.	SE <sup>by</sup> E.	2	ocr	...	30.025	59.3	59.3	100	63.5	10	...	Cum.		
8.	SE <sup>by</sup> E.	2	od	...	30.049	58.8	58.8	100	...	8	...	Cum.		
10.	SE <sup>by</sup> E.	2	o	...	30.076	59.8	58.8	94	...	10	...	Cum.		
Noon.	S <sup>by</sup> W.	3	od	...	30.078	59.8	58.8	94	...	10	...	Cum.		
2.	S <sup>by</sup> W.	2	c	...	30.049	61.5	60.8	96	...	9	...	Cum.		
4.	S <sup>by</sup> W.	2	c	...	30.055	61.8	60.8	94	...	8	...	Cum.		
6.	S <sup>by</sup> W.	2	o	...	30.069	61.3	60.8	97	63.2	10	...	Cum.		
8.	S <sup>by</sup> W.	1	o	...	30.081	60.8	60.8	100	...	9	...	Cum.		
10.	sw <sup>by</sup> w.	1	or	...	30.077	60.8	59.8	94	...	10	...	Cum.		
Midt.	w <sup>by</sup> s.	1	or	...	30.069	59.3	58.8	97	...	10	...	Cum.		
Totals.	...	28	ocr	...	672	1.3	115.1	83	...	114	...	Cum.		
Mean.	s.s.w.	2		...	30.056	60.1	59.6	97	63.3	9	...	...	...	

SUNDAY, 29th MARCH 1874.

Hour.	Wind.		Weather.	State of Sky. 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.			Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w.N.	1	or	...	30.068	50.3	58.8	97	...	10	...	Cum.		At Melbourne. Temperature by self-registering thermo- meter, max. 60°, min. 58°.
4.	w.N.	1	od	...	30.070	58.8	58.8	100	...	10	...	Cum.		
6.	w.N.	1	od	...	30.077	58.8	58.8	100	63.5	9	...	Cum.		
8.	Caln.	0	o	...	30.138	59.8	59.8	100	...	9	...	Cum.		
10.	Caln.	0	o	...	30.158	62.2	61.8	99	...	8	...	Cum.		
Noon.	s.w.	1	c	...	30.160	63.2	62.8	97	...	9	...	Cm.&Str.		
2.	s.w.w.	1	bc	...	30.163	65.8	64.3	91	...	7	...	Cm.&Str.		
4.	s.w.	2	c	...	30.170	64.8	64.3	97	...	8	Str.	Cm.&Str.		
6.	s.e.	3	c	...	30.205	64.3	63.8	97	64.0	8	...	Cm.&Str.		
8.	s.e.	12	bc	...	30.233	63.8	62.8	94	...	9	...	Cm.&Str.		
10.	s.e.	3	bc	...	30.273	63.3	62.8	97	...	7	...	Cm.&Str.		
Midt.	s.e.	3	bc	...	30.275	62.8	62.3	97	...	5	...	Cm.&Str.		
Totals.	...	18		...	1900	26.9	21.1	86	...	99		Str.	Cum. & Str.	
Mean.	s.s.w.	1		...	30.166	62.2	61.8	97	63.7	8				

MONDAY, 30th.

2.	s.e.e.	2	bc	...	30.281	62.8	61.8	94	...	7	Str.	Cum.		At Melbourne. Temperature by self-registering thermo- meter, max. 66° 5, min. 54° 0.
4.	s.e.	3	bc	...	30.279	61.8	60.8	94	...	8	...	Cum.		
6.	s.e.e.	5	bcq	...	30.336	61.3	59.8	91	60.5	5	Cir.	Cum.		
8.	s.e.e.	3	bcq	...	30.368	61.8	59.8	88	...	7	Cir.	Cum.		
10.	s.e.e.	6	bcq	...	30.391	62.8	60.3	85	...	7	Cir.	Cum.		
Noon.	s.e.e.	5	bcq	...	30.393	64.8	62.3	85	...	8	Cir.	Cum.		
2.	s.e.e.	6	bcq	...	30.374	64.8	62.3	85	...	8	Cir.	Cum.		
4.	s.e.e.	5	bcq	...	30.365	63.8	61.8	88	...	7	Str.	Cum.		
6.	s.e.e.	4	cyp	...	30.359	63.8	61.8	88	64.2	9	Str.	Cum.		
8.	s.e.	3	cyp	...	30.357	61.3	60.8	97	...	10	...	Cum.		
10.	s.e.	3	or	...	30.354	60.3	60.3	100	...	10	...	Cum.		
Midt.	s.e.	2	or	...	30.346	60.8	60.3	97	...	10	...	Str.		
Totals.	...	49		...	4203	30.1	12.1	12	...	96		Cir str.	Cum.	
Mean.	s.e.e.	4		...	30.350	62.5	61.0	91	62.3	8				

TUESDAY, 31st.

2.	s.e.	2	ocd	...	30.324	61.3	60.8	97	...	10	...	Cum str.		At Melbourne. Temperature by self-registering thermo- meter, max. 65°, min. 59°.
4.	s.e.	2	oc	...	30.317	61.8	61.3	97	...	10	...	Cum str.		
6.	s.e.	1	ocr	...	30.315	61.8	61.8	100	63.5	10	...	Cum str.		
8.	Caln.	0	or	...	30.302	61.8	61.3	97	...	10	...	Cum.		
10.	Caln.	0	or	...	30.273	61.8	61.8	100	...	10	...	Str.		
Noon.	Caln.	0	or	...	30.269	63.3	63.3	100	...	10	...	Str.		
2.	Caln.	0	or	...	30.139	64.8	64.8	100	...	10	...	Cum.		
4.	Caln.	0	ocr	...	30.160	64.8	64.8	100	...	10	...	Cum.		
6.	s.e.	1	ocr	...	30.080	64.8	64.8	100	64.0	10	...	Cum.		
8.	Caln.	0	o	...	30.073	64.8	64.8	100	...	10	...	Cm.&Str.		
10.	s.e.e.	1	bc	...	30.061	64.3	64.3	100	...	4	...	Cm.&Str.		
Midt.	s.e.	1	bcn	...	29.985	63.8	63.8	100	...	7	...	Cm.&Str.		
Totals.	...	8		...	2229	39.1	37.6	1191	...	111		Cum., Str. & Cum str.		
Mean.	Variable.	1		...	30.186	63.3	63.1	99	63.7	9				



## SATURDAY, 4th April 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Thermometer. Barometer re- duced to 32° and Sea-Level.	Thermometer.				Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. - 100.				Upper.	Lower.	
2.	swbw.	2	bc	1	29.863	61.8	60.8	94	69.5	8	...	Cir.	Cum.	At noon, lat. 37° 0' s. long. 150° 30' E. Temperature by self-registering thermo- meter, max. 69°, min. 58° 5.
4.	swbw.	3	bc	1	29.865	61.5	59.8	90	71.0	4	...	...	Cum.	
6.	swbw.	1	bc	1	29.860	61.5	59.8	90	71.0	12	...	...	Sm. cum.	
8.	w.s.w.	2	bc	1	29.865	61.5	61.8	84	71.0	12	...	...	Cum.	
10.	w.	2	bc	1	29.893	64.8	60.8	78	69.0	12	...	Cir.	Cum.	Sp. gr. 1.02657.
Noon.	swbw.	1	bc	1	29.895	67.3	63.3	78	72.0	12	...	Cir.	Str.	
2.	Calm.	0	bc	1	29.835	67.8	62.8	73	71.5	12	...	Cir.	Cum.	
4.	s <sup>b</sup> e.	1	bc	1	29.810	67.0	61.8	72	71.0	12	...	Cir.	Cum.	
6.	swb <sup>s</sup> .	1	bc	1	29.768	66.8	62.8	78	70.7	3	...	Cir.	Sm. cum.	Sp. gr. 1.02513.
8.	N.N.E.	2	bc	1	29.787	66.8	64.3	85	70.0	3	...	Cir.	Cum.	
10.	N.N.E.	3	bc	1	29.793	66.8	64.3	85	70.5	3	...	Cir.	Cum.	
Midt.	S.S.W.	2	bc	1	29.770	66.8	64.3	85	70.0	1	...	Cir.	Cum.	
Totals.	...	20	bc	12	10004	63.4	26.6	992	7.2	34	...	Cir.	Cum.	
Mean. Variable.	2			1	29.834	65.3	62.2	83	70.6	3	...			

## SUNDAY, 5th.

2.	w.	4	b	1	29.731	64.3	62.8	91	70.0	0	...	...	...	At noon, lat. 36° 12' s. long. 150° 15' E. Temperature by self-registering thermo- meter, max. 73°, min. 62°. Passed several pieces of sea-weed in forenoon. Gulls in sight all day.
4.	w.	3	b	...	29.735	64.8	61.3	81	69.7	0	...	...	...	
6.	N.W.	3	bc	...	29.736	63.5	59.8	79	68.2	1	...	...	Sm. cum.	
8.	N.W.	3	bc	...	29.785	63.3	59.5	78	69.5	1	...	...	Cum.	
10.	swb <sup>s</sup> .	2	bc	...	29.776	65.8	60.8	73	70.0	1	...	...	Sm. cum.	Sp. gr. 1.02513.
Noon.	s <sup>b</sup> w.	2	bc	...	29.737	67.8	62.8	73	70.0	2	...	...	Cum.	
2.	NEb <sup>s</sup> .	2	bc	1	29.725	68.8	65.3	81	71.0	1	...	Cir.	...	
4.	NEb <sup>s</sup> .	3	bc	1	29.731	69.3	65.3	78	70.0	1	...	Cir.	...	
6.	NEb <sup>s</sup> .	2	bc	1	29.765	70.8	67.8	83	70.0	2	...	Cir.	...	Sp. gr. 1.02513.
8.	swb <sup>s</sup> .	3	bc	1	29.847	66.8	62.8	78	69.5	3	...	...	Cum.	
10.	wb <sup>s</sup> .	2	bc	1	29.878	67.8	62.8	73	68.5	3	...	Str.	Cum.	
Midt.	wb <sup>s</sup> .	3	bc	1	29.921	66.8	62.8	78	68.5	2	...	...	Sm. cum.	
Totals.	...	32	bc	7	9367	79.8	33.8	946	114.9	17	...	Cir str.	Sm. cum.	
Mean.	swb <sup>s</sup> .	3		1	29.781	66.6	62.8	79	69.6	1	...			

## MONDAY, 6th.

2.	N.N.W.	2	bc	...	29.933	65.8	61.8	78	68.5	1	Cir.	...	...	At noon, lat. 34° 0' s. long. 151° 18' E.
4.	swbw.	3	bc	...	29.938	64.3	61.8	86	69.0	1	Cir.	...	...	
6.	swbw.	1	bc	...	30.008	66.3	63.3	83	71.0	1	...	...	Sm. cum.	
8.	s <sup>b</sup> w.	2	b	...	30.053	69.3	64.3	73	70.2	0	...	...	...	
10.	NEb <sup>s</sup> .	1	bc	...	30.084	68.8	62.8	68	70.2	1	...	...	Sm. cum.	4 p.m., anchored in Farm cove, Port Jackson.
Noon.	NEb <sup>s</sup> .	1	b	...	30.067	70.8	65.0	70	71.7	0	...	...	...	
2.	N.N.E.	1	bc	...	30.030	71.3	66.3	73	...	1	Cir.	...	...	
4.	NEb <sup>s</sup> .	2	b	...	30.037	71.8	66.8	71	...	0	...	...	...	
6.	NEb <sup>s</sup> .	2	b	...	30.038	69.8	66.3	81	...	0	...	...	...	4 p.m., anchored in Farm cove, Port Jackson.
8.	NEb <sup>s</sup> .	1	b	...	30.064	67.8	65.3	85	...	0	...	...	...	
10.	NEb <sup>s</sup> .	1	b	...	30.068	69.0	64.8	77	...	0	...	...	...	
Midt.	NEb <sup>s</sup> .	1	b	...	30.195	65.8	63.8	88	...	0	...	...	...	
Totals.	...	18	bc	...	455	100.8	52.3	936	0.6	5	...	Cir.	Sm. cum.	
Mean.	s <sup>b</sup> e.	2		...	30.038	68.4	64.4	78	70.0	1	...			

## TUESDAY, 7TH APRIL 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.107	64.3	63.3	94	...	0	...	...	At Sydney.
4.	Calm.	0	b	...	30.108	62.3	61.3	94	...	0	...	...	
6.	w <sup>b</sup> N.	1	b	...	30.214	60.8	59.8	94	...	0	...	...	
8.	w <sup>b</sup> N.	1	b	...	30.239	64.8	63.3	91	...	0	...	...	
10.	s <sup>b</sup> w.	2	bc	...	30.247	69.3	67.8	91	...	7	...	Cum.	
Noon.	s <sup>b</sup> w.	2	bc	...	30.263	71.3	69.8	91	...	7	...	Cum.	
2.	s <sup>b</sup> e.	2	bc	...	30.250	72.8	69.8	84	...	7	...	...	
4.	s <sup>b</sup> e.	2	bc	...	30.251	74.8	70.8	79	...	6	...	Cum str.	
6.	sE <sup>b</sup> s.	1	bc	...	30.240	71.8	69.8	89	...	7	...	Cum str.	
8.	s.	1	bc	...	30.235	70.8	68.8	88	...	5	...	Cum str.	
10.	s.	1	bc	...	30.263	69.3	67.8	91	...	7	...	Cum str.	
Midt.	s <sup>b</sup> w.	2	bc	...	30.299	70.3	68.8	91	...	8	...	Cum.	
Totals.	...	15	bc	...	2716	102.6	81.1	1077	...	54	...	Cum. & Cum str.	
Mean.	s <sup>b</sup> w $\frac{1}{2}$ w.	1	...	...	30.226	68.5	66.8	89	...	4	...	...	

## WEDNESDAY, 8TH.

2.	s <sup>b</sup> w.	2	o	...	30.304	68.8	68.8	100	...	9	...	Cum.	At Sydney.
4.	Calm.	0	or	...	30.307	67.8	67.8	100	...	10	...	Cum.	
6.	Calm.	0	or	...	30.309	67.3	67.3	100	...	10	...	Cum.	
8.	w <sup>b</sup> N.	1	or	...	30.370	65.8	65.8	100	...	9	...	Cum.	
10.	w <sup>b</sup> N.	1	cr	...	30.372	66.8	66.3	97	...	8	...	Cum.	
Noon.	Calm.	0	cr	...	30.360	68.8	68.8	100	...	7	...	Cum.	
2.	w.s.w.	1	cr	...	30.320	68.8	68.8	100	...	7	...	Cum.	
4.	Calm.	0	cr	...	30.320	69.3	68.8	97	...	8	...	Cum.	
6.	s <sup>b</sup> w.	1	bc	...	30.308	69.8	68.8	94	...	6	...	Cum.	
8.	Calm.	0	bc	...	30.316	67.8	67.3	97	...	7	...	Cum.	
10.	Calm.	0	bc	...	30.349	66.8	66.8	100	...	5	...	Cum.	
Midt.	Calm.	0	bc	...	30.335	65.8	65.3	97	...	9	...	Cum.	
Totals.	...	6	cr	...	3970	93.6	90.6	102	...	95	...	Cum.	
Mean.	sw $\frac{1}{2}$ w.	1	...	...	30.331	67.8	67.5	98	...	8	...	...	

## THURSDAY, 9TH.

2.	Calm.	0	bc	...	30.316	64.8	64.8	100	...	8	...	Cum.	At Sydney.
4.	Calm.	0	c	...	30.276	65.5	65.3	97	...	7	...	Cum.	
6.	Vble.	1	cr	...	30.279	66.3	66.3	100	...	9	...	Cum. & N.b.	
8.	sE <sup>b</sup> s.	1	bcp	...	30.289	70.8	70.3	97	...	6	Cir str.	Cum.	
10.	e <sup>b</sup> s.	2	bc	...	30.307	73.3	72.3	94	...	7	...	Cum. & Str.	
Noon.	sE <sup>b</sup> e.	1	bc	...	30.302	72.8	72.3	97	...	5	...	Cum str.	
2.	e <sup>b</sup> N.	1	bc	...	30.240	73.3	72.8	97	...	3	...	Cum.	
4.	e <sup>b</sup> N.	1	bc	...	30.230	73.8	72.8	94	...	4	...	Cum.	
6.	e <sup>b</sup> N.	1	bc	...	30.242	72.8	72.3	97	...	6	...	Cum.	
8.	e <sup>b</sup> N.	1	bc	...	30.257	71.8	71.8	100	...	2	...	Cum.	
10.	Calm.	0	bc	...	30.254	70.3	70.3	100	...	2	...	Cum.	
Midt.	Calm.	0	bcm	...	30.267	69.3	69.3	100	...	1	...	Cum.	
Totals.	...	9	bcp	...	3259	4.8	0.6	93	...	60	Cir str.	Cum. & Str.	
Mean.	e <sup>b</sup> s.	1	...	...	30.272	70.4	70.0	98	...	5	...	...	

## FRIDAY, 10TH APRIL 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds 0 to 10.		Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	Calm.	0	f	...	30.251	69.0	68.8	90	...	10	...	Str.	...	At Sydney.
4.	Calm.	0	f	...	30.231	67.8	67.8	100	...	10	...	Str.	...	
6.	Calm.	0	f	...	30.235	68.8	67.8	94	...	10	...	Str.	...	
8.	Calm.	0	bcn	...	30.237	68.8	68.3	97	...	...	...	Cir.	...	
10.	sw by.	1	bcn	...	30.244	72.8	71.8	94	...	...	...	Cum.	...	
Noon.	Calm.	0	bc	...	30.227	79.3	74.8	78	...	...	...	...	...	
2.	SE by E.	1	bc	...	30.201	76.3	72.3	79	...	5	...	...	...	
4.	SE by S.	1	bc	...	30.205	74.8	72.0	85	...	...	...	Cir str.	...	
6.	SE by E.	1	bcl	...	30.206	73.3	71.3	89	...	...	...	Cin. & Str.	...	
8.	Calm.	0	bcl	...	30.217	73.3	72.3	94	...	...	...	Cin. & Str.	...	
10.	Calm.	0	bcl	...	30.213	72.3	71.3	94	...	...	...	Cum.	...	
Midt.	Vble.	1	bcl	...	30.235	71.3	70.8	97	...	...	...	Cum.	...	
Totals.	...	5	bcl	...	2742	27.8	9.3	1100	...	86	...	Cir str.	Cum. & Str.	
Mean.	SE by S.	1		...	30.228	72.3	70.8	92	...	8	...			

## SATURDAY, 11TH.

2.	Calm.	0	bc	...	30.214	69.8	69.3	97	...	8	...	Cum.	...	At Sydney. Temperature by self-registering thermometer, max. 75°.
4.	Calm.	0	cd	...	30.199	69.8	69.8	100	...	8	...	Cum.	...	
6.	sw by.	1	c	...	30.207	69.8	69.3	97	...	9	...	Cum.	...	
8.	sw by.	2	c	...	30.219	79.8	70.3	97	...	9	...	Cum.	...	
10.	sw by.	3	bc	...	30.237	71.8	70.8	94	...	8	...	Cir str.	...	
Noon.	SE by E.	1	bcp	...	30.199	73.8	71.8	89	...	9	...	Cum.	...	
2.	SE by S.	2	bc	...	30.169	73.3	71.8	91	...	7	...	Cin. & Str.	...	
4.	SE by S.	1	bc	...	30.154	73.3	71.3	89	...	7	...	Cin. & Str.	...	
6.	SE by S.	1	bc	...	30.164	71.5	71.5	96	...	7	...	Cin. & Str.	...	
8.	SE by S.	1	bcl	...	30.157	70.3	69.3	94	...	5	...	Cum.	...	
10.	SE by S.	1	bc	...	30.169	70.3	68.5	90	...	6	...	Cum.	...	
Midt.	Calm.	0	bc	...	30.193	68.3	67.3	94	...	5	...	Cum.	...	
Totals.	...	13	bcp	...	2341	12.8	1.0	1128	...	88	...	Cir str.	Cum. & Str.	
Mean.	SE by E.	1		...	30.195	71.1	70.1	94	...	7	...			

## SUNDAY, 12TH.

2.	Calm.	0	bc	...	30.195	67.8	67.3	97	...	2	...	Cum.	...	At Sydney. Temperature by self-registering thermometer, max. 75° 5, min. 64° 0.
4.	sw by.	1	bew	...	30.170	66.8	66.3	97	...	5	...	Cum.	...	
6.	Calm.	0	bc	...	30.148	65.3	65.3	100	...	5	...	Cin. & Str.	...	
8.	sw by.	1	bc	...	30.160	66.3	65.8	97	...	7	...	Cin. & Str.	...	
10.	sw by.	1	bc	...	30.162	69.3	68.8	97	...	8	...	Cir cum.	...	
Noon.	SE by N.	1	bc	...	30.149	72.3	69.8	87	...	8	...	Cir.	...	
2.	S. by E.	1	bc	...	30.090	71.8	68.8	84	...	5	...	Cir cum.	...	
4.	E by S.	1	bc	...	30.069	72.8	68.8	79	...	5	...	Cir.	...	
6.	E by S.	1	bcl	...	30.050	73.3	68.8	91	...	7	...	Cum str.	...	
8.	Calm.	0	bcl	...	30.067	71.0	69.3	90	...	7	...	Cum str.	...	
10.	Calm.	0	bcl	...	30.088	69.3	68.3	94	...	7	...	Cum.	...	
Midt.	Calm.	0	bc	...	29.088	68.3	67.3	94	...	6	...	Cum.	...	
Totals.	...	7	bcl	...	1436	111.3	94.6	1107	...	72	...	Cir cum.	Cum. & Str.	
Mean.	Variable.	1		...	30.120	69.3	67.9	92	...	6	...			

## MONDAY, 13TH APRIL 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.065	68.3	66.8	91	...	3	...	Cum. & Str.	At Sydney. Temperature by self-registering thermometer, max. 77° 5, min. 64° 5.
4.	Calm.	0	bc	...	30.045	66.5	66.0	97	...	2	...	Cir str.	
6.	wbN.	1	bc	...	30.039	67.3	66.3	94	...	3	...	Cum. & Str.	
8.	wbN.	1	bc	...	30.072	66.3	65.8	97	...	3	...	Cum. & Str.	
10.	Calm.	0	bc	...	30.049	74.5	71.3	83	...	3	...	Cum.	
Noon.	sbe.	1	bc	...	29.996	74.5	71.8	85	...	2	...	Cum.	
2.	ebS.	1	bc	...	29.963	74.5	72.3	88	...	1	...	Cum.	
4.	NEbe.	3	bc	...	29.931	73.8	71.8	89	...	4	...	Cum. & Str.	
6.	S.E.	2	bc	...	29.935	71.8	70.8	94	...	3	...	Cum.	
8.	NEbe.	1	bc	...	29.932	71.3	69.3	88	...	5	...	Cum.	
10.	Calm.	0	bc	...	29.942	70.8	69.3	91	...	3	...	Cum.	
Midt.	Calm.	0	oc	...	29.925	70.8	69.8	94	...	10	...	Cum str.	
Totals.	...	10	bc	...	11885	10.4	111.3	11	...	45	...	Cir str.	
Mean.	NEbe.	1	bc	...	29.990	70.9	69.3	91	...	4	...	Cum. & Str.	

## TUESDAY, 14TH.

2.	w. s. w.	1	bc	...	29.922	69.8	69.3	97	...	8	...	Cum.	At Sydney. Temperature by self-registering thermometer, max. 68°, min. 60°.
4.	Calm.	0	bc	...	29.915	69.3	68.3	94	...	4	...	Cum. & Str.	
6.	wbS.	1	bc	...	29.917	67.8	66.8	94	...	5	...	Cum. & Str.	
8.	sbe.	1	cp	...	29.903	68.3	66.8	91	...	9	...	Cum. & N.b.	
10.	sbe.	2	oc	...	30.032	67.3	65.8	91	...	10	...	Cum.	
Noon.	s.	2	oc	...	30.055	65.8	64.3	91	...	8	...	Cum.	
2.	sbe.	5	bcq	...	30.096	67.3	64.3	83	...	7	...	Cum. & Str.	
4.	sbe.	3	eq	...	30.115	64.8	64.5	99	...	10	...	Cum str.	
6.	sbe.	2	c	...	30.139	64.8	63.8	94	...	8	...	Nimb.	
8.	s.	1	bep	...	30.192	64.8	63.8	94	...	9	...	Cum str.	
10.	swbw.	1	op	...	30.172	64.8	64.3	97	...	10	...	Cum.	
Midt.	swbw.	2	oc	...	30.193	63.8	63.3	97	...	10	...	Cum.	
Totals.	...	20	cp	...	651	78.6	65.3	42	...	98	...	Cum. & Str.	
Mean.	s. s. w.	2	cp	...	30.054	66.5	65.4	94	...	8	...	Cum. & Str.	

## WEDNESDAY, 15TH.

2.	swbw.	1	oc	...	30.187	63.8	62.8	94	...	10	...	Cum.	At Sydney.
4.	s. w.	2	bc	...	30.233	62.8	62.3	97	...	5	...	Cum.	
6.	swbw.	1	bc	...	30.239	63.3	62.3	94	...	8	...	Cum str.	
8.	wbS.	1	bc	...	30.280	61.5	59.8	90	...	5	...	Cum.	
10.	wbN.	1	bc	...	30.269	65.8	63.8	88	...	6	...	Cum str.	
Noon.	swbw.	1	bc	...	30.289	72.8	68.3	77	...	7	...	Cum.	
2.	sbe.	1	bc	...	30.255	68.8	65.8	83	...	7	...	Cum.	
4.	E. S. E.	1	bc	...	30.236	68.8	65.8	83	...	3	...	Cum str.	
6.	E. S. E.	1	bc	...	30.224	67.8	65.8	88	...	1	...	Cum.	
8.	Calm.	0	b	...	30.217	66.3	64.8	91	...	0	...	...	
10.	Calm.	0	b	...	30.231	63.8	63.3	97	...	0	...	...	
Midt.	Calm.	0	b	...	30.233	62.8	62.3	97	...	0	...	...	
Totals.	...	10	bc	...	2893	68.3	47.1	107.9	...	52	...	Cum. & Cum str.	
Mean.	Variable.	1	bc	...	30.241	65.7	63.9	90	...	4	...	Cum. & Cum str.	

## THURSDAY, 16TH APRIL 1874.

Hour.	Wind		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.			Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	Calm.	0	b	...	30.221	62.3	61.8	97	...	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 73°, min. 58° 5.
4.	wbs.	1	b	...	30.223	60.8	60.3	97	...	...	0	...	...	
6.	Calm.	0	bc	...	30.213	59.8	59.8	100	...	...	7	...	Cum.	
8.	Calm.	0	bc	...	30.239	62.8	62.5	98	...	...	6	Cir.	...	
10.	swbw.	2	bc	...	30.236	67.3	65.3	88	...	...	3	...	Cm. & Str.	
Noon.	NE by E.	1	bc	...	30.215	70.3	67.3	83	...	...	2	...	Cm. & Str.	
2.	NE by E.	1	bc	...	30.194	70.8	67.8	83	...	...	3	...	Cm. & Str.	
4.	E by S.	2	bc	...	30.165	71.8	69.3	87	...	...	2	...	Cm. & Str.	
6.	E by S.	1	bc	...	30.177	70.8	68.8	88	...	...	2	...	Cm. & Str.	
8.	SE by E.	1	b	...	30.207	67.8	66.8	94	...	...	0	...	...	
10.	Calm.	0	bw	...	30.227	67.3	66.3	94	...	...	0	...	...	Tots.
Midt.	Calm.	0	bw	...	30.245	65.3	64.8	97	...	...	0	...	...	
Totals.	...	9	bc	...	2562	77.1	60.8	26	...	...	25	Cir.	Cum. & Str.	
Mean. Variable.	1	1	...	...	30.214	66.4	65.1	92	...	...	2	...	...	

## FRIDAY, 17TH.

2.	wbs.	2	bm	...	30.246	62.8	62.5	98	...	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 76°, min. 59°.
4.	Calm.	0	b	...	30.238	60.8	59.8	94	...	...	0	...	...	
6.	wbs.	1	bc	...	30.240	61.3	60.8	97	...	...	2	...	Cum.	
8.	w.	1	b	...	30.282	62.3	60.3	88	...	...	0	...	...	
10.	wbs.	1	b	...	30.282	60.3	66.3	83	...	...	0	...	...	
Noon.	Calm.	0	bc	...	30.241	73.3	69.5	80	...	...	2	...	Cum.	
2.	E by S.	1	bc	...	30.204	73.3	69.8	82	...	...	2	...	Cum.	
4.	E by S.	2	bc	...	30.199	71.3	69.3	88	...	...	2	...	Cum.	
6.	E by S.	1	bc	...	30.202	70.8	67.8	83	...	...	2	...	Cum.	
8.	E by S.	1	b	...	30.207	68.8	66.3	86	...	...	0	...	...	Tots.
10.	SE by E.	2	b	...	30.226	66.8	64.8	88	...	...	0	...	...	
Midt.	Calm.	0	b	...	30.257	66.3	64.3	88	...	...	0	...	...	
Totals.	...	12	bc	...	2824	87.1	61.5	95	...	...	10	...	Cum.	
Mean. Variable.	1	1	...	...	30.235	67.3	65.1	88	...	...	1	...	...	

## SATURDAY, 18TH.

2.	Calm.	0	bw	...	30.245	64.3	63.3	94	...	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 79° 5, min. 62° 7.
4.	Calm.	0	bw	...	30.206	63.3	61.8	91	...	...	0	...	...	
6.	Calm.	0	bc	...	30.198	61.3	60.3	94	...	...	1	Cir str.	...	
8.	swbw.	1	bc	...	30.212	62.3	61.3	94	...	...	2	Cir.	...	
10.	wbs.	1	c	...	30.211	68.8	66.8	83	...	...	10	Cir.	Cum.	
Noon.	swbw.	1	c	...	30.190	68.8	68.3	97	...	...	10	Cir.	Cum.	
2.	swbw.	1	c	...	30.144	78.3	70.8	66	...	...	9	Cir.	Cum.	
4.	Calm.	0	bc	...	30.145	76.8	70.3	69	...	...	9	Cir.	Cum.	
6.	swbw.	1	bc	...	30.159	71.3	67.3	78	...	...	4	...	Cm. & Str.	
8.	Calm.	0	bc	...	30.177	69.3	67.8	91	...	...	5	...	Cm. & Str.	Tots.
10.	Calm.	0	bc	...	30.178	68.8	67.8	94	...	...	4	...	Cum.	
Midt.	Calm.	0	bc	...	30.177	66.3	65.8	97	...	...	5	...	Cum.	
Totals.	...	5	bc	...	2242	100.6	71.6	1048	...	...	59	Cir.	Cum. & Str.	
Mean. w.s.w.	1	1	...	...	30.187	68.4	66.0	87	...	...	5	...	...	

## SUNDAY, 19TH APRIL 1874.

Hour.	Wind.		Weather.	State of Sky. 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.b.s.	1	be	...	30.178	67.3	65.3	88	...	4	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 79°, min. 61° 5.
4.	w.b.x.	1	oe	...	30.171	65.8	63.8	88	...	10	...	Cum.	
6.	w.b.x.	1	e	...	30.162	64.8	64.3	97	...	8	...	Cm.&Str.	
8.	w.b.x.	1	be	...	30.209	65.3	64.5	95	...	7	...	Cm.&Str.	
10.	w.x.w.	1	be	...	30.219	68.8	66.8	88	...	4	Cir.&Cist.	...	
Noon.	Calm.	0	be	...	30.188	74.8	69.8	74	...	5	Cir.	Cum.	
2.	s.e.b.s.	1	be	...	30.161	74.8	70.0	75	...	6	Cir str.	...	
4.	e.b.s.	1	be	...	30.145	72.8	69.8	84	...	5	Cir str.	...	
6.	e.b.s.	1	be	...	30.107	71.8	69.8	89	...	9	...	Cm.&Str.	
8.	Calm.	0	be	...	30.137	69.3	68.3	94	...	4	...	Cum.	
10.	Calm.	0	bel	...	30.145	68.8	68.3	97	...	7	...	Cum.	
Midt.	Calm.	0	bel	...	30.124	67.8	66.8	94	...	5	...	Cum.	
Totals.	...	8	be	...	1946	112.1	87.5	1063	...	74	Cir str.	Cum. & Str.	
Mean.	Variable.	1		...	30.162	69.4	67.3	89	...	6			

## MONDAY, 20TH.

2.	Calm.	0	be	...	30.121	66.8	65.8	94	...	7	...	Cm.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 75°, min. 61° 5.
4.	Calm.	0	be	...	30.115	65.8	65.3	97	...	5	...	Cum.	
6.	w.b.x.	1	cm	...	30.122	64.3	63.8	97	...	8	...	Cum.	
8.	Calm.	0	f	...	30.114	64.3	63.8	97	...	10	...	Str.	
10.	w.b.x.	1	be	...	30.098	70.8	68.8	88	...	3	...	Cum.	
Noon.	sw.b.w.	1	be	...	30.057	71.8	68.3	82	...	2	...	Cum.	
2.	Calm.	0	be	...	29.997	74.8	67.8	66	...	3	...	Cum.	
4.	Calm.	0	be	...	29.991	74.8	70.3	76	...	5	...	Cum.	
6.	Calm.	0	be	...	30.002	71.8	70.3	91	...	4	...	Cm.&Str.	
8.	Calm.	0	...	...	30.024	70.8	66.8	78	...	...	...	...	
10.	Calm.	0	b	...	30.040	68.8	67.3	91	...	0	...	...	
Midt.	Calm.	0	be	...	30.053	66.3	65.3	94	...	2	...	Cm.&Str.	
Totals.	...	...	be	...	734	111.4	83.6	1051	...	49	...	Cum. & Str.	
Mean.	Calm.	0		...	30.061	69.3	67.0	88	...	4			

## TUESDAY, 21ST.

2.	w.b.s.	1	bel	...	30.052	64.8	64.5	98	...	4	...	Cm.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 71°, min. 62°.
4.	Calm.	0	bel	...	30.054	64.3	63.8	97	...	3	...	Cm.&Str.	
6.	w.b.x.	1	be	...	30.037	63.8	63.3	97	...	5	...	Cm.&Str.	
8.	w.	1	be	...	30.153	63.8	62.5	93	...	5	Cir str.	Cum.	
10.	sw.b.w.	2	be	...	30.186	68.8	63.8	73	...	8	Cir cum.	Cum.	
Noon.	sw.b.w.	3	be	...	30.169	70.3	66.8	81	...	6	Cir cum.	Cum.	
2.	sw.b.w.	4	be	...	30.190	69.8	67.8	88	...	6	...	Cum.	
4.	s.b.e.	2	cyp	...	30.205	68.3	67.3	94	...	9	...	Cm.&Nb.	
6.	s.b.e.	3	cyp	...	30.217	66.8	65.8	91	...	7	...	Cum.	
8.	s.b.s.	2	bel	...	30.219	67.3	65.8	91	...	7	...	Cum.	
10.	s.b.s.	3	bel	...	30.251	67.8	66.8	94	...	8	...	Cum.	
Midt.	s.b.s.	2	beqpl	...	30.253	65.8	63.8	88	...	9	...	Cm.&Nb.	
Totals.	...	24	beqpl	...	1986	81.6	62.0	1085	...	77	Cir cum.	Cum., Str., & Nimb.	
Mean.	sw.b.s.	2		...	30.165	66.8	65.2	91	...	6			

## WEDNESDAY, 22d APRIL 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 3	Barometer reduced to Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	ori	...	30.269	64.8	64.3	97	...	9	...	Cu. & Nb.	At Sydney. Temperature by self-registering thermo- meter, max. 69°5, min. 63°5.
4.	Calm.	0	cp	...	30.274	64.8	64.3	97	...	7	...	Cu. & Nb.	
6.	Calm.	0	be	...	30.243	63.8	63.3	97	...	6	...	Cum str.	
8.	Calm.	0	be	...	30.253	63.8	63.3	97	...	7	...	Cum str.	
10.	sw.	1	be	...	30.264	67.8	67.3	97	...	7	...	Cum.	
Noon.	sw.	2	or	...	30.256	67.8	67.0	95	...	9	...	Cum.	
2.	Calm.	0	or	...	30.194	67.8	66.8	94	...	9	Str.	Cum.	
4.	sw.	1	be	...	30.193	67.8	67.8	100	...	8	...	Cu. & Nb.	
6.	Calm.	0	be	...	30.195	67.3	66.8	97	...	7	...	Cum.	
8.	Calm.	0	be	...	30.186	67.3	66.8	97	...	4	Cir.	Cum.	
10.	Calm.	0	be	...	30.184	65.8	65.8	100	...	4	...	Cum.	
Midt.	sw.	1	be	...	30.173	64.8	64.3	97	...	3	...	Cum.	
Totals.	...	5	bepr	...	2684	73.6	67.8	85	...	80	Cir str.	Cum. & Nimb.	
Mean.	Calm.	0		...	30.224	66.1	65.6	97	...	7			

## THURSDAY, 23d.

2.	Calm.	0	be	...	30.153	63.8	63.3	97	...	4	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 74°, min. 62°5.
4.	Calm.	0	beq	...	30.114	62.8	62.8	100	...	3	Cir.	Cum.	
6.	Calm.	0	f	...	30.116	62.3	62.3	100	...	10	...	Cum.	
8.	Calm.	0	c	...	30.119	62.3	62.3	100	...	8	...	Cum.	
10.	Calm.	0	be	...	30.096	67.8	66.8	94	...	2	...	Cum.	
Noon.	Calm.	0	be	...	30.021	72.8	68.3	76	...	1	...	Cum.	
2.	N.E.	2	be	...	30.006	72.8	70.8	89	...	1	...	Cum.	
4.	N.E.	3	be	...	29.982	72.3	69.8	87	...	3	Cir cum.	Cum.	
6.	N.E.	4	be	...	29.967	69.8	69.3	91	...	4	...	Cum.	
8.	Calm.	0	be	...	29.988	69.3	68.8	97	...	2	...	Cum.	Midnight observed a brilliant meteor to swbs., altitude 25° to 30°.
10.	Calm.	0	be	...	29.990	69.0	68.3	95	...	4	...	Cum.	
Midt.	Calm.	0	be	...	29.994	68.3	67.8	97	...	2	...	Cum str.	
Totals.	...	9	beq	...	546	93.3	80.6	43	...	44	Cir cum.	Cum.	
Mean.	N.E.	1		...	30.045	67.8	66.7	94	...	4			

## FRIDAY, 24th.

2.	ws.	1	be	...	29.998	65.8	64.8	94	...	3	...	Cu. & Str.	At Sydney. Temperature by self-registering thermo- meter, max. 69°, min. 60°.
4.	ws.	2	cpl	...	29.989	64.8	63.3	91	...	9	...	Cu. & Str.	
6.	Calm.	0	be	...	30.006	63.8	62.8	94	...	5	...	Cum.	
8.	Calm.	0	be	...	30.042	63.8	62.8	94	...	9	...	Cum.	
10.	swbw.	1	be	...	30.050	66.3	65.3	94	...	7	...	Cu. & Str.	
Noon.	swbs.	4	c	...	30.068	68.3	67.8	97	...	10	...	Cum.	
2.	sw.	3	eq	...	30.088	66.5	64.8	90	...	10	...	Cum.	
4.	sw.	4	eq	...	30.131	65.8	62.8	83	...	9	...	Cum.	
6.	sw.	3	eq	...	30.148	64.8	61.8	83	...	10	...	Cum.	
8.	sw.	2	c	...	30.230	64.8	61.3	81	...	10	...	Cum.	
10.	sw.	4	beq	...	30.253	64.3	61.3	82	...	8	...	Cum.	
Midt.	sw.	1	be	...	30.245	63.3	60.3	82	...	7	...	Cu. & Str.	
Totals.	...	25	eq	...	1248	62.3	59.1	105	...	97		Cir. & Str.	
Mean.	s. s. w.	2		...	30.104	65.2	63.3	89	...	8			

SATURDAY, 25th APRIL 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.e.	5	bc	...	30.230	61.8	58.8	82	...	6	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 64°, min. 57° 5.
4.	s.e.	12	bc	...	30.220	61.8	57.8	77	...	5	...	Cum & Cum str.	
6.	s.w.	5	cp	...	30.238	60.8	59.8	94	...	9	...	Cum. & N.b.	
8.	s.w.	12	bcp	...	30.277	61.3	58.8	85	...	10	...	Cum.	
10.	s.s.w.	2	op	...	30.301	62.8	59.8	82	...	10	...	Cum.	
Noon.	s.w.	12	op	...	30.289	61.8	59.8	88	...	10	...	Cum str.	
2.	s.w.	3	cp	...	30.258	62.8	60.3	85	...	10	...	Cum & Cum str.	
4.	s.w.	3	cp	...	30.268	62.3	60.3	88	...	10	...	Cum & N.b.	
6.	s.w.	4	cp	...	30.261	60.8	59.8	88	...	7	...	Cum & Str.	
8.	s.w.	2	cp	...	30.261	58.8	58.8	100	...	10	...	Cum.	
10.	Calm.	0	cp	...	30.290	60.8	60.8	100	...	7	...	Cum & N.b.	
Midt.	w.b.	12	bc	...	30.283	59.8	59.8	100	...	9	...	Cum.	
Totals.	...	33	bc	...	3176	15.6	114.1	1069	...	103	...	Cum. & Cum str.	
Mean.	s.s.w.	3	bc	...	30.265	61.3	59.5	89	...	9	...	Cum str.	

SUNDAY, 26th.

2.	w.b.	1	bc	...	30.276	59.3	58.3	94	...	7	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 70°, min. 61°.
4.	w.b.	2	c	...	30.263	58.8	58.8	100	...	9	...	Cum.	
6.	s.e.	1	bcp	...	30.238	61.8	59.8	88	...	8	...	Cum.	
8.	s.e.	2	bcp	...	30.246	63.8	61.3	85	...	9	...	Cum.	
10.	s.e.	1	eqp	...	30.269	62.8	61.3	91	...	9	...	Cum & N.b.	
Noon.	s.e.	2	cp	...	30.272	66.3	64.8	91	...	8	...	Cum & Cum str.	
2.	s.e.	1	bc	...	30.228	66.8	66.8	100	...	7	...	Cum & Str.	
4.	s.w.	2	bc	...	30.228	67.8	66.8	94	...	8	...	Cir str.	
6.	s.w.	1	bcp	...	30.228	63.8	62.3	91	...	8	...	Cum.	
8.	s.w.	3	bcp	...	30.231	63.8	62.8	94	...	8	...	Cum & Cum str.	
10.	s.w.	2	bcp	...	30.229	63.3	62.3	94	...	8	...	Cum & Cum str.	
Midt.	w.b.	1	bcp	...	30.217	62.3	61.8	97	...	8	...	Cum & Cum str.	
Totals.	...	19	bcp	...	2925	49.6	27.1	39	...	97	...	Cir str.	Cum. & Cum str.
Mean.	s.w.	2	bcp	...	30.214	63.4	62.3	93	...	8	...	Cum str.	

MONDAY, 27th.

2.	s.s.w.	1	cr	...	30.223	62.8	62.8	100	...	9	...	Cum str.	At Sydney. Temperature by self-registering thermo- meter, max. 67°, min. 59°.
4.	s.s.w.	1	cr	...	30.203	62.8	62.3	97	...	9	...	Cum.	
6.	Calm.	0	or	...	30.189	62.3	62.3	100	...	10	...	Nimb.	
8.	s.w.	1	cr	...	30.204	63.8	62.8	94	...	9	...	Cir.	
10.	s.w.	1	bc	...	30.195	64.8	62.8	88	...	7	...	Cum str.	
Noon.	s.w.	4	bcp	...	30.126	65.8	63.8	88	...	9	...	Cum str.	
2.	s.w.	4	bcp	...	30.114	65.8	64.0	89	...	7	...	Str.	
4.	s.s.w.	3	bcp	...	30.105	64.8	63.3	91	...	9	...	Cum.	
6.	s.s.w.	2	cp	...	30.072	63.8	63.3	97	...	10	...	Cum.	
8.	s.w.	1	or	...	30.118	61.8	61.3	97	...	10	...	Cum.	
10.	s.w.	2	cp	...	30.103	62.3	61.8	97	...	9	...	Cum.	
Midt.	w.b.	1	cp	...	30.077	61.8	61.8	100	...	10	...	Cum.	
Totals.	...	21	cp	...	1729	42.6	32.3	58	...	108	...	Cir str.	Cum. & Cum str.
Mean.	s.s.w.	2	cp	...	30.144	63.5	62.7	95	...	9	...	Cum str.	

## TUESDAY, 28th APRIL 1874.

Hour.	Wind.		Weather.	State of Sea, a to g.	Barometer re- duced to 32 and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	s.w.	5	opr	...	30.034	59.8	59.8	100	...	10	...	Cm. & Nb.	At Sydney. Temperature by self-registering thermo- meter, max. 63.5, min. 59.7. Probably a strong wind outside as the clouds were flying over very fast.
4.	s.w.	1	opr	...	30.046	60.8	60.8	100	...	10	...	Nimb.	
6.	s.w.	3	opr	...	30.075	60.8	59.8	94	...	10	...	Nimb.	
8.	s.w.	2	opr	...	30.020	60.8	60.3	97	...	10	...	Nimb.	
10.	s.w.	3	opr	...	30.005	61.3	60.3	94	...	10	...	Cm. & Nb.	
Noon.	s.w.	4	opr	...	...	62.3	61.3	94	...	10	...	Cm. & Nb.	
2.	s.w.	4	opr	...	29.961	62.8	62.3	97	...	10	...	Cum.	
4.	s.w.	4	opr	...	29.943	62.8	62.3	97	...	10	...	Cum.	
6.	s.w.	4	opr	...	29.943	61.8	61.0	95	...	10	...	Cum.	
8.	s.w.	5	opr	...	29.951	61.8	60.8	94	...	10	...	Cum.	
10.	s.w.	2	opr	...	29.967	61.8	60.8	94	...	10	...	Cum str.	
Milt.	s.w.	5	opr	...	29.974	60.8	59.8	94	...	10	...	Cum str.	
Totals.	...	38	opr	...	10792	17.6	9.3	70	...	...	...	Cum & Nimb.	
Mean.	s.w.	3		...	29.981	61.5	60.8	96	...	10	...		

## WEDNESDAY 29th

2.	s.w.	2	opr	...	29.941	59.8	58.8	94	...	10	...	Cm. & Str.	At Sydney.
4.	s.w.	2	opr	...	29.943	60.3	59.3	94	...	10	...	Cm. & Str.	
6.	s.w.	2	opr	...	29.948	59.8	58.8	94	...	9	...	Cm. & Str.	
8.	s.w.	3	opr	...	29.974	60.3	58.8	91	...	10	...	Cum str.	
10.	s.w.	2	opr	...	29.981	61.3	58.8	85	...	9	...	Cum str.	
Noon.	s.w.	4	opr	...	29.950	62.8	59.3	89	...	10	...	Cum str.	
2.	s.w.	3	opr	...	29.952	65.3	61.3	78	...	7	...	Cum str.	
4.	s.w.	5	opr	...	29.968	63.8	60.8	82	...	9	...	Cum str.	
6.	s.w.	3	opr	...	29.986	62.8	59.8	82	...	7	...	Cum str.	
8.	s.w.	2	opr	...	30.013	61.8	59.3	85	...	8	...	Cum.	
10.	s.w.	3	opr	...	30.022	62.8	59.8	82	...	9	...	Cum.	
Milt.	s.w.	2	opr	...	30.022	61.8	59.8	88	...	10	...	Cum.	
Totals.	...	36	opr	...	11709	22.6	114.6	75	...	108	...	Cum & Cum str.	
Mean.	s.w.	3		...	29.976	61.9	59.5	86	...	9	...		

## THURSDAY, 30th.

2.	s.w.	2	opr	...	30.066	61.3	58.8	85	...	10	...	Cum str.	At Sydney.  Thermometers removed from screen whilst it was being repaired and painted.
4.	s.w.	3	opr	...	30.098	61.3	58.3	82	...	6	...	Cum str.	
6.	s.w.	2	opr	...	30.025	60.3	58.8	91	...	8	...	Cm. & Str.	
8.	s.w.	3	opr	...	30.064	61.8	59.8	88	...	9	...	Cum.	
10.	s.w.	4	opr	...	30.064	62.8	60.3	85	...	9	...	Cum.	
Noon.	s.w.	2	opr	...	30.070	...	...	...	...	7	...	Cum.	
2.	s.w.	2	opr	...	30.016	...	...	...	...	9	...	Cum str.	
4.	s.w.	3	opr	...	30.067	...	...	...	...	8	...	Cum str.	
6.	s.w.	2	opr	...	30.018	...	...	...	...	10	...	Nimb.	
8.	s.w.	1	opr	...	30.046	...	...	...	...	7	...	Cum str.	
10.	s.w.	2	opr	...	30.054	...	...	...	...	9	...	Cum str.	
Milt.	s.w.	1	opr	...	30.053	...	...	...	...	7	...	Cum str.	
Totals.	...	27	opr	...	1431	7.5	16.0	121	...	99	...	Cum & Cum str.	
Mean.	s.w.	2		...	30.036	61.5	59.2	86	...	8	...		

## FRIDAY, 1st MAY 1874.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer re- duced to 32° and sea level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wbs.	2	bc	...	30.027	...	...	...	...	8	Str.	Cum.	At Sydney.
4.	wbs.	1	bew	...	30.016	...	...	...	...	3	...	Cum str.	
6.	wbs.	1	bc	...	29.988	...	...	...	...	4	...	Cum str.	
8.	wbs.	2	bc	...	29.990	...	...	...	...	4	...	Cum.	
10.	s.w.	1	bc	...	29.976	...	...	...	...	9	Cir.	Cum.	
Noon.	s.w.	2	bc	...	29.955	...	...	...	...	6	...	Cum.	
2.	swbs.	2	bc	...	29.927	...	...	...	...	6	Cir.	Cum.	
4.	swb.	3	bc	...	29.893	...	...	...	...	7	Cir.	Cum.	
6.	swbw.	2	bc	...	29.898	...	...	...	...	6	...	Cum.	
8.	swb.	1	bc	...	29.897	...	...	...	...	7	Str.	Cum.	
10.	swbw.	2	cr	...	...	...	...	...	...	10	...	Cum.&Nb.	
Midt.	wbs.	1	bc	...	29.891	...	...	...	...	7	Cir cum.	Cum.	
Totals.	...	20	...	...	10458	...	...	...	...	77	Cir str.	Cum. & Cum str.	
Mean.	swbw.	2	...	...	29.951	...	...	...	...	6	...	...	

## SATURDAY, 2d.

2.	wbs.	1	bc	...	29.883	...	...	...	...	7	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 67°, min. 61°·5.
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	s.s.w.	2	bcp	...	29.881	...	...	...	...	8	...	Cum.	
8.	swbs.	3	bcp	...	29.870	...	...	...	...	9	...	Cum.	
10.	s.s.w.	2	cqp	...	29.862	...	...	...	...	8	...	Cum.&Nb.	
Noon.	s.s.w.	3	cqp	...	29.851	64.8	62.8	88	...	10	...	Cum.&Nb.	
2.	swbw.	5	cqpr	...	29.823	64.8	62.8	88	...	10	...	Cum.	
4.	swbs.	3	cqpr	...	29.832	65.3	62.3	83	...	10	...	Cum.	
6.	swbs.	4	cqpr	...	29.833	64.8	61.8	83	...	10	...	Cum str.	
8.	swbs.	1	crq	...	29.811	62.8	62.5	98	...	10	...	Cum.&Cum str.	
10.	swbs.	2	orq	...	29.833	62.8	62.8	100	...	10	...	Nimb.	
Midt.	swbs.	1	orq	...	29.828	62.8	62.3	97	...	10	...	Nimb.	
Totals.	...	27	...	...	9307	28.1	17.3	637	...	102	...	Cum & Nimb.	
Mean.	swbs.	2	cqpr	...	29.846	64.0	62.5	91	...	9	...	...	

## SUNDAY, 3d.

2.	swbs.	3	orq	...	29.813	62.8	62.3	97	...	10	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 65°·5, min. 57°·5.
4.	swbs.	6	cqp	...	29.783	63.8	63.3	97	...	10	...	Cum.&Str.	
6.	s.s.w.	3	cqpr	...	29.787	63.8	62.8	94	...	10	...	Cum.&Nb.	
8.	s.s.w.	5	cqpr	...	29.798	63.8	62.8	94	...	10	...	Cum.&Nb.	
10.	s.s.w.	1	cqpr	...	29.801	62.8	61.8	94	...	10	...	Nimb.	
Noon.	swbw.	3	cqpr	...	29.761	62.8	61.8	94	...	10	...	Nimb.	
2.	swbw.	1	cqpr	...	29.755	61.3	61.3	100	...	10	...	Nimb.	
4.	swbw.	4	cqpr	...	29.744	61.3	60.8	97	...	10	...	Nimb.	
6.	swbw.	5	cqpr	...	29.728	58.8	58.8	100	...	10	...	Nimb.	
8.	swbw.	2	cqpr	...	29.723	57.8	57.8	100	...	10	...	Nimb.	
10.	swbw.	2	cr	...	29.736	58.8	58.8	100	...	10	...	Nimb.	
Midt.	wbs.	3	cp	...	29.706	60.3	59.8	97	...	9	...	Cum.&Nb.	
Totals.	...	38	...	...	9135	18.1	12.1	1164	...	119	...	Cum & Nimb.	
Mean.	s.w.	3	cqpr	...	29.761	61.5	61.0	97	...	10	...	...	

## MONDAY, 4TH MAY 1874.

Hour.	Wind.		Weather.	State of sea, 0 to 9.	Barometer re- duced to 32° and sea level.	Thermometer		Humidity, Sat. at 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.	42	cp	...	29.668	60.3	59.3	94	...	9	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 75°, min. 58°.
4.	w.	43	cp	...	29.655	60.8	59.8	94	...	8	...	Cum.&Nth.	
6.	w.	42	e	...	29.643	59.8	58.3	91	...	9	...	Cum str.	
8.	w.	3	be	...	29.659	61.3	58.8	85	...	7	...	Cum.&Str.	
10.	swbw.	42	be	...	29.651	65.0	60.8	77	...	3	Str.	Cum.	
Noon.	swbw.	3	be	...	29.645	67.3	60.8	66	...	5	...	Cum.	
2.	wbs.	4	be	...	29.630	69.8	61.8	61	...	4	...	Cum.	
4.	wbs.	3	be	...	29.630	72.3	62.8	60	...	3	...	Cum.	
6.	Calm.	0	be	...	29.660	67.3	63.3	78	...	3	...	Cum.	
8.	Calm.	0	b	...	29.712	65.3	60.3	73	...	0	...	...	
10.	Calm.	0	b	...	29.724	64.8	59.8	73	...	0	...	...	
Midt.	wbs.	1	b	...	29.737	63.3	58.8	75	...	0	...	...	
Totals.	...	23	hep	...	8014	57.3	5.6	927	...	51	...	...	
Mean.	wbs.	2		...	29.668	64.8	60.5	77	...	4	Str.	Cum. & Str.	

## TUESDAY, 5TH.

2.	Calm.	0	b	...	29.756	61.3	58.3	82	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 75°, min. 57°.
4.	Calm.	0	b	...	29.768	59.8	56.8	82	...	0	...	...	
6.	swbs.	1	b	...	29.810	59.8	56.8	82	...	0	...	...	
8.	swbw.	1	b	...	29.896	61.3	57.8	79	...	0	...	...	
10.	swbw.	1	b	...	29.915	66.8	61.8	73	...	0	...	...	
Noon.	swbw.	1	be	...	29.909	69.8	61.8	61	...	3	...	Cum.&Str.	
2.	swbw.	1	be	...	29.873	71.8	64.8	65	...	6	Cir cum.	...	
4.	swbw.	1	be	...	29.873	69.8	63.3	67	...	7	Cir cum.	...	
6.	swbw.	1	be	...	29.858	67.8	63.3	75	...	6	Cir.	Cum.	
8.	swbw.	1	be	...	29.895	65.8	59.8	68	...	4	...	Str.	
10.	swbw.	1	be	...	29.921	64.3	59.8	75	...	2	...	Cum.&Str.	
Midt.	Calm.	0	be	...	29.923	62.3	58.8	79	...	6	Cir.	Cum.&Str.	
Totals.	...	9	be	...	16397	60.6	3.1	888	...	34	...	...	
Mean.	swbw.	1		...	29.866	65.0	60.3	74	...	3	Cir. & Cir cum.	Cum. & Str.	

## WEDNESDAY, 6TH.

2.	Calm.	0	be	...	29.929	60.3	57.8	85	...	5	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 62° 5, min. 58° 0.
4.	Calm.	0	e	...	29.912	59.8	56.8	82	...	10	...	Cum str.	
6.	Calm.	0	e	...	29.896	58.8	56.8	88	...	9	...	Cum str.	
8.	Calm.	0	e	...	29.916	58.8	56.8	88	...	10	...	Cum str.	
10.	swbw.	1	cmp	...	29.906	59.8	57.8	88	...	9	...	Cum str.	
Noon.	Calm.	0	cp	...	29.896	59.8	57.8	88	...	10	...	Cum str.	
2.	Calm.	0	cp	...	29.864	60.8	59.3	91	...	9	...	Cum str.	
4.	Calm.	0	e	...	29.824	61.8	60.8	94	...	9	...	Cum str.	
6.	Calm.	0	cp	...	29.835	60.8	59.8	94	...	9	...	Cum.	
8.	Calm.	0	cp	...	29.829	60.8	59.8	94	...	10	...	Cum.	
10.	swbw.	1	be	...	29.838	60.8	58.8	88	...	4	...	Cum.&Str.	
Midt.	Calm.	0	be	...	29.809	60.8	58.8	88	...	2	...	Cum.&Str.	
Totals.	...	2	cp	...	19454	3.1	101.1	198	...	96	...	...	
Mean.	Calm.	0		...	29.871	60.3	58.4	89	...	8	...	Cum & Cum str.	

THURSDAY, 7TH MAY 1874.

Hour.	Wind		Weather.	State of Sky. at 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity. Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.814	59.8	58.8	94	...	2	...	Cum.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 70°, min. 54° 5.
4.	s'w.	2	bc	...	29.797	59.8	58.3	91	...	3	...	Cum.&Str.	
6.	s'w.	1	bc	...	29.814	58.8	57.8	94	...	2	...	Cum.	
8.	Calm.	0	bc	...	29.859	61.8	58.8	82	...	4	...	Cum.&Str.	
10.	s'w.	1	bc	...	29.861	64.8	59.8	73	...	7	...	Cum.	
Noon.	s'w.	2	bc	...	29.845	66.8	59.3	62	...	3	...	Cum.	
2.	s'w'w.	2	bc	...	29.825	69.3	60.3	56	...	4	...	Cum.	
4.	s'w'w.	3	bc	...	29.834	68.3	59.8	58	...	3	...	Cum.	
6.	s'w'w.	1	bc	...	29.892	59.8	59.3	97	...	2	...	Cum.&Str.	
8.	Calm.	0	b	...	29.925	60.8	58.8	88	...	0	...	...	
10.	Calm.	0	b	...	29.939	60.3	56.3	76	...	0	...	...	
Midt.	s'w'w.	1	b	...	29.930	59.8	55.8	76	...	0	...	...	
Totals.	...	13	bc	...	10335	60.1	60.1	947	...	30	...	Cum & Str.	
Mean.	N.W.	1		...	29.861	62.5	58.6	79	...	3			

FRIDAY, 8TH.

2.	Calm.	0	bc	...	29.967	57.8	54.8	81	...	1	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 71° 5, min. 52° 0.
4.	Calm.	0	b	...	29.971	57.8	54.8	81	...	0	...	...	
6.	Calm.	0	b	...	30.002	56.8	54.3	84	...	0	...	...	
8.	w's.	1	bc	...	30.040	57.0	54.3	83	...	2	...	Cum.&Str.	
10.	w.	2	bc	...	30.063	65.8	62.3	80	...	2	...	Cum.	
Noon.	w's.	1	bc	...	30.054	67.8	58.8	56	...	2	...	Cum.	
2.	s'w.	1	bc	...	30.022	67.8	58.8	56	...	4	...	Cum.	
4.	s'w.	1	bc	...	30.041	71.0	61.3	54	...	5	...	Cum.	
6.	Calm.	0	bc	...	30.057	63.8	57.8	67	...	4	...	Cum.&Str.	
8.	Calm.	0	bc	...	30.092	60.8	57.8	82	...	3	...	Cum.&Str.	
10.	s'w'w.	2	bc	...	30.095	58.3	56.8	90	...	4	...	Cum.	
Midt.	w's.	1	bc	...	30.128	56.8	54.8	87	...	1	...	Cum.	
Totals.	...	9	bc	...	5592	21.5	86.6	901	...	28	...	Cum. & Str.	
Mean.	w.s.w.	1		...	30.044	61.8	57.2	75	...	2			

SATURDAY, 9TH.

2	w's.	2	b	...	30.118	55.8	52.8	81	...	2	...	Cum.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 75° 5, min. 54° 0.
4	w's.	1	b	...	30.108	54.3	51.3	80	...	0	...	...	
6	w's.	1	bc	...	30.102	54.3	51.8	83	...	2	...	Cum.&Str.	
8	w's.	1	bc	...	30.151	55.8	52.8	81	...	2	...	Cum.&Str.	
10.	w.s.w.	1	bc	...	30.172	58.3	54.8	79	...	2	...	Cum.&Str.	
Noon.	w.s.w.	1	bc	...	30.157	69.3	62.3	64	...	3	...	Cum.&Str.	
2.	s'w.	1	bc	...	30.121	68.8	62.8	68	...	8	...	Cum.&Str.	
4	Calm.	0	bc	...	30.113	67.8	60.8	64	...	5	...	Cum.&Str.	
6	Calm.	0	bc	...	30.107	63.8	59.8	77	...	5	...	Cum.&Str.	
8	Calm.	0	bc	...	30.113	60.3	57.3	82	...	2	...	Str.	
10	Calm.	0	bc	...	30.127	57.8	56.8	93	...	2	...	Cum.&Str.	
Midt.	Calm.	0	bc	...	30.155	56.8	55.3	90	...	6	...	Cum.&Str.	
Total.	...	8	bc	...	1524	3.1	78.6	942	...	39	...	Cum. & Str.	
Mean.	w.	1		...	30.127	60.3	56.5	79	...	3			

## SUNDAY, 10th May 1871.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity. Sat. at 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	W.N.W.	1	bc	...	30.133	55.8	53.8	87	...	6	...	Cum. & Str.	At Sydney. Temperature by self-registering thermometer, max. 69°, min. 55°.
4.	W.N.W.	1	bc	...	30.115	55.8	54.3	90	...	8	...	Cum. & Str.	
6.	SW.W.	1	bc	...	30.103	55.8	54.0	88	...	5	...	Cum.	
8.	W.N.W.	1	bc	...	30.126	54.8	53.8	93	...	1	...	Cum.	
10.	W.N.W.	2	bc	...	30.122	53.8	52.3	85	...	3	...	Cum. & Str.	
Noon.	Calm.	0	bc	...	30.080	67.3	62.3	73	...	5	...	Cum.	
2.	E.N.E.	1	bc	...	30.023	66.0	61.3	75	...	6	...	Cir.	
4.	SE.E.	3	bc	...	29.984	65.8	60.8	73	...	5	...	Cir.	
6.	SE.E.	1	bc	...	29.977	64.8	61.3	80	...	6	...	Cir.	
8.	SE.E.	2	bc	...	29.977	63.8	60.8	82	...	6	...	Cum.	
10.	SE.E.	3	bc	...	29.978	63.8	60.8	82	...	4	...	Str.	
Midd.	SE.E.	1	bc	...	29.948	64.8	63.3	91	...	4	...	Str.	
Totals.	...	17		...	566	18.3	103.8	9.9	...	62			
Mean.	Fble.	1		...	30.047	61.5	58.6	83	...	5		Cir. str.	Cum. & Str.

## MONDAY, 11th.

2.	N.N.E.	2	bc	...	29.948	64.3	60.8	80	...	5	...	Cum. & Str.	At Sydney. Temperature by self-registering thermometer, max. 72°, min. 54°. 2 A.M., heavy rain; to westward, 5.30 P.M., wind shifted suddenly to westward in a sharp squall, with thunder and lightning.
4.	N.E.	1	bc	...	29.895	63.8	60.8	82	...	3	...	Cum. & Str.	
6.	N.E.	1	bc	...	29.873	60.8	58.8	88	...	5	...	Cum.	
8.	N.E.	1	bc	...	29.869	66.3	61.8	76	...	3	...	Cum. & Str.	
10.	N.E.	2	bc	...	29.831	60.8	61.8	61	...	4	...	Cum. & Str.	
Noon.	N.E.	1	bc	...	29.763	60.8	61.3	59	...	3	...	Cum. & Str.	
2.	N.E.	2	bc	...	29.686	70.3	60.3	53	...	3	...	Cir.	
4.	W.N.	5	eqrl	...	29.731	59.8	56.8	82	...	10	...	Str. & Str.	
6.	SW.N.	3	bc	...	29.708	60.8	56.8	77	...	8	...	Cum. & Str.	
8.	SW.W.	4	bc	...	29.721	60.3	55.8	74	...	5	...	Cum. & Str.	
10.	SW.W.	2	bc	...	29.772	59.3	54.8	74	...	2	...	Str.	
Midd.	SW.W.	1	bc	...	29.764	58.8	54.8	71	...	1	...	Str.	
Totals.	...	25	bc & eqrl	...	9531	44.1	103.6	8.7	...	52		Cir. str. & Cum. str.	
Mean.	N.W.	2		...	29.794	63.7	58.6	73	...	4			

## TUESDAY 12th.

2.	SW.W.	1	bc	...	29.771	57.3	52.3	79	...	0	...	...	At Sydney. Temperature by self-registering thermometer, max. 66°, min. 54°.
4.	SW.W.	1	bc	...	29.776	55.8	50.8	79	...	0	...	...	
6.	SW.W.	1	bc	...	29.778	54.8	50.8	75	...	2	...	Str.	
8.	SW.W.	2	bc	...	29.792	56.8	51.3	68	...	4	...	Cum. & Str.	
10.	SW.W.	1	bc	...	29.820	56.8	51.8	70	...	7	...	Cum.	
Noon.	W.N.	2	bc	...	29.794	58.8	52.8	66	...	4	...	Cum.	
2.	W.N.	1	bc	...	29.741	61.3	53.8	60	...	7	...	Cum. & Str.	
4.	W.N.	3	bc	...	29.761	61.8	53.3	56	...	6	...	Cir.	
6.	W.N.	1	bc	...	29.794	59.8	51.8	58	...	4	...	Cum. & Str.	
8.	W.N.	2	bc	...	29.807	57.8	51.3	65	...	4	...	Cum. & Str.	
10.	W.N.	2	bc	...	29.810	56.8	50.8	65	...	1	...	Str.	
Midd.	W.N.	2	bc	...	29.894	56.5	50.8	66	...	4	...	Cum.	
Totals.	...	19	bc	...	9448	94.3	21.8	7.9	...	43		Cir.	Cum. & Str.
Mean.	W.N.W.	2		...	29.787	57.9	51.8	66	...	4			

## WEDNESDAY, 13TH MAY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity. Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W.N.W.	2	bc	...	29.800	55.8	50.8	70	...	1	Cir.	...	At Sydney. Temperature by self-registering thermo- meter, max. 70°, min. 53°.
4.	W.N.W.	2	bc	...	29.795	55.8	51.0	71	...	2	Cir.	...	
6.	W.N.W.	1	b	...	29.794	56.3	52.3	75	...	0	...	...	
8.	W.N.W.	2	bc	...	29.872	58.8	53.8	71	...	3	...	Cum.	
10.	W.	3	bc	...	29.866	63.8	56.8	63	...	4	...	Cum.	
Noon.	W.	3	bc	...	29.859	64.8	56.8	59	...	2	...	Cum.&Str.	
2.	W.N.W.	3	bc	...	29.837	67.8	58.3	54	...	4	...	Cum.	
4.	W.N.W.	2	bc	...	29.841	65.8	57.8	60	...	5	Cir str.	Cum.	
6.	W.N.W.	3	bc	...	29.853	63.8	55.8	59	...	5	...	Cum.&Str.	
8.	W.N.W.	1	bc	...	29.884	59.8	54.8	71	...	2	...	Cum.&Str.	
10.	W.N.W.	2	bc	...	29.920	57.8	53.8	76	...	3	...	Cum.&Str.	
Midt.	W.N.W.	1	bc	...	29.932	57.3	52.8	74	...	2	...	Cum.&Str.	
Totals.	...	24	bc	...	10253	7.6	54.8	803	...	33	Cir str.	Cum. & Str.	
Mean.	W.	2		...	29.854	60.6	54.6	67	...	3			

## THURSDAY 14TH.

2.	W.N.W.	1	bc	...	29.932	55.8	52.3	78	...	2	...	Cum.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 72°, min. 52°.
4.	W.N.W.	2	bc	...	29.922	55.8	52.8	75	...	3	...	Cum.&Str.	
6.	W.	1	bc	...	29.914	54.8	51.5	78	...	4	...	Cum.&Str.	
8.	W.N.W.	2	bc	...	29.948	55.8	51.8	75	...	4	Cir.	Cum.&Str.	
10.	W.N.W.	1	bc	...	29.959	61.3	55.8	70	...	4	...	Cum.&Str.	
Noon.	swbw.	3	bc	...	29.948	64.8	56.8	59	...	4	...	Cum.&Str.	
2.	swbw.	1	bc	...	29.905	68.8	58.8	53	...	5	Cir.	Cum.&Str.	
4.	swbw.	2	bc	...	29.899	68.5	59.8	57	...	5	...	Cum.&Str.	
6.	Calcu.	0	bc	...	29.903	64.8	57.8	63	...	8	...	Cum.&Str.	
8.	W.N.W.	1	bc	...	29.926	61.8	56.8	72	...	4	...	Cum.&Str.	
10.	W.N.W.	1	bc	...	29.948	58.8	54.3	74	...	2	...	Cum.&Str.	
Midt.	W.N.W.	1	bc	...	29.957	58.8	54.3	74	...	3	...	Cum.&Str.	
Totals.	...	16	bc	...	11161	9.8	62.6	828	...	49	Cir.	Cum. & Str.	
Mean.	W.S.W.	1		...	29.930	60.8	55.2	69	...	4			

## FRIDAY, 15TH.

2.	W.N.W.	1	bc	...	29.940	57.3	52.8	73	...	3	...	Cum.&Str.	At Sydney.
4.	W.N.W.	2	bc	...	29.932	55.8	50.8	70	...	3	...	Cum.&Str.	
6.	swbw.	1	bc	...	29.948	54.8	50.8	75	...	2	...	Cum.	
8.	W.N.W.	1	bc	...	29.947	55.8	50.8	70	...	3	Cir.	Cum.	
10.	swbw.	2	bc	...	29.949	63.8	56.5	62	...	7	...	Cum.	
Noon.	S.W.	5	bc	...	29.941	65.8	56.8	56	...	6	Cir.	Cum.	
2.	swbw.	3	bc	...	29.934	67.3	57.3	52	...	4	...	Cum.&Str.	
4.	swbw.	4	bc	...	29.920	65.3	55.8	53	...	3	...	Cum.&Str.	
6.	swbw.	2	bc	...	29.934	61.8	54.8	62	...	3	...	Cum.&Str.	
8.	W.N.W.	1	bc	...	29.955	60.3	53.8	64	...	3	...	Cum.&Str.	
10.	swbw.	2	bc	...	29.953	59.5	52.8	63	...	2	...	Cum.&Str.	
Midt.	swbw.	1	bc	...	29.954	58.8	52.8	66	...	1	...	Cum.&Str.	
Totals.	...	25	bc	...	11307	726.3	45.8	766	...	40	Cir.	Cum. & Str.	
Mean.	swbw.	2		...	29.942	60.5	53.8	64	...	3			

## SATURDAY, 16TH MAY 1871.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb.w.	1	bc	...	29.956	55.8	50.8	70	...	2	...	Cm.&Str.	At Sydney.
4.	wbs.	1	bc	...	29.955	54.3	50.3	74	...	2	...	Cm.&Str.	
6.	wbs.	1	bc	...	29.964	52.8	49.3	77	...	3	...	Cm.&Str.	
8.	wbs.	1	bc	...	29.964	54.3	49.8	72	...	3	...	Cm.&Str.	
10.	wbs.	1	bc	...	29.962	61.8	54.8	62	...	12	...	Cm.&Str.	
Noon.	wbs.	5	bc	...	29.976	61.8	54.8	62	...	6	...	Cm.&Str.	
2.	swbs.	3	bc	...	29.942	62.3	55.0	61	...	7	Cir.	Cum.	
4.	swbs.	4	bc	...	29.942	61.8	54.8	62	...	7	...	Cum.	
6.	swbs.	1	bc	...	29.943	60.8	54.8	67	...	7	...	Cm.&Str.	
8.	swbs.	1	bc	...	29.986	60.3	54.8	69	...	5	...	Cm.&Str.	
10.	swb.w.	2	bc	...	29.979	57.3	51.8	68	...	3	...	Cm.&Str.	
Midt.	swb.w.	1	b	...	29.976	55.8	51.8	75	...	0	...	...	
Totals.	...	25	bc	...	11605	609.1	32.8	99	...	48	Cir.	Cum. & Str.	
Mean.	swb.w.	2		...	29.967	58.3	52.7	68	...	4			

## SUNDAY, 17TH.

2.	swb.w.	1	b	...	29.945	54.0	49.8	73	...	0	...	...	At Sydney. Temperature by self-registering thermometer, max. 73°, min. 50°-5.
4.	swb.w.	1	bc	...	29.930	52.8	49.3	77	...	3	...	Cum.	
6.	wbs.	2	bc	...	29.943	52.3	48.3	74	...	3	...	Cm.&Str.	
8.	wbs.	1	bc	...	29.918	52.8	48.8	74	...	2	...	Cm.&Str.	
10.	wbs.	3	bc	...	29.898	62.8	55.8	63	...	2	...	Cm.&Str.	
Noon.	wbs.	2	bc	...	29.895	63.8	56.5	62	...	3	Cir.	Cm.&Str.	
2.	wbs.	1	bc	...	29.876	69.8	58.8	50	...	2	Cir.	Cm.&Str.	
4.	wbs.	2	bc	...	29.851	70.3	60.8	56	...	5	Cir.	Cm.&Str.	
6.	wbs.	1	bc	...	29.854	69.0	57.8	49	...	6	Cir.	Cm.&Str.	
8.	wbs.	1	bc	...	29.868	61.8	56.8	72	...	6	...	Cm.&Str.	
10.	wbs.	1	bc	...	29.876	58.8	53.8	71	...	7	...	Cum.	
Midt.	wbs.	2	bc	...	29.865	57.8	52.8	71	...	6	...	Cm.&Str.	
Totals.	...	18	bc	...	10719	6.0	49.3	792	...	45	Cir.	Cum. & Str.	
Mean.	w.	1		...	29.893	60.5	54.1	66	...	4			

## MONDAY, 18TH.

2.	wb.s.	1	bc	...	29.868	56.8	51.8	70	...	1	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 73°, min. 54°-5.
4.	wb.s.	3	bc	...	29.866	55.8	51.8	75	...	1	Cir.	Cum.	
6.	w.	1	bc	...	29.878	54.0	49.8	73	...	1	...	Cum.	
8.	wb.s.	1	bc	...	29.920	54.3	49.8	72	...	2	...	Cm.&Str.	
10.	wb.s.	1	bc	...	29.934	64.3	53.8	50	...	2	...	Cm.&Str.	
Noon.	wb.s.	1	bc	...	29.921	64.3	54.3	51	...	3	Cir.	Str.	
2.	Calm.	0	bc	...	29.883	70.8	60.8	53	...	3	Cir.	Str.	
4.	Calm.	0	bc	...	29.884	67.3	59.3	60	...	3	...	Str.	
6.	NE <sup>3</sup> E.	1	b	...	29.903	64.3	57.8	65	...	0	...	...	
8.	Calm.	0	b	...	29.933	62.8	57.8	72	...	0	...	...	
10.	Calm.	0	b	...	29.949	59.8	54.8	71	...	0	...	...	
Midt.	Calm.	0	b	...	29.964	57.8	53.8	76	...	0	...	...	
Totals.	...	9	bc	...	10903	12.3	55.6	788	...	16	Cir.	Cum. & Str.	
Mean. Variable.	1	...		29.909	61.0	54.6	66	...	1				

## TUESDAY, 19TH MAY 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	29.983	56.3	53.8	84	...	0	...	...	At Sydney. Temperature by self-registering thermometer, max. 66°, min. 54°.
4.	Calm.	0	bc	...	29.992	55.8	53.8	87	...	2	...	Str.	
6.	Calm.	0	bc	...	29.994	55.8	53.3	84	...	4	...	Cum.&Str.	
8.	Calm.	0	bc	...	30.005	55.8	54.8	93	...	9	...	Cum.&Str.	
10.	Calm.	0	bc	...	30.012	56.0	53.8	86	...	8	...	Cum.&Str.	
Noon.	Calm.	0	bc	...	29.979	55.8	53.8	87	...	9	...	Cum str.	
2.	Calm.	0	c	...	29.910	59.3	57.3	88	...	8	...	Cum str.	
4.	Calm.	0	ocr	...	29.906	58.8	56.8	88	...	10	...	Cum.	
6.	Calm.	0	ocr	...	29.878	59.3	57.8	91	...	9	...	Cum str.	
8.	swb.	1	c	...	29.862	59.8	57.3	85	...	10	...	Cum.	
10.	wb.	1	c	...	29.820	60.0	56.8	81	...	9	...	Cum.	
Midt.	swbw.	2	eq	...	29.812	58.8	55.8	82	...	10	...	Cum.	
Totals.	...	4	...	...	11153	691.5	65.1	76	...	88	...	Cum., Str., & Cum str.	
Mean.	Calm.	0	eq	...	29.929	57.6	55.4	86	...	7	...		

## WEDNESDAY, 20TH.

2.	swbw.	2	bc	...	29.763	56.3	54.3	87	...	6	Str.	Cum.	At Sydney. Temperature by self-registering thermometer, max. 66°, min. 50° 5. 11 A.M., wind shifted suddenly to westward.
4.	Calm.	0	ocr	...	29.736	55.8	53.8	87	...	10	...	Cum.	
6.	wb.	1	oc	...	29.698	55.8	54.5	91	...	10	...	Cum.	
8.	swb.	1	c	...	29.701	55.8	53.8	87	...	9	...	Cum.	
10.	swb.	2	bc	...	29.695	58.8	54.8	76	...	1	Cir.	Cum.	
Noon.	wb.	5	bc	...	29.652	62.8	54.8	59	...	2	Cir.	Cum.	
2.	wb.	6	bc	...	29.629	65.8	55.3	50	...	2	...	Cum.	
4.	w.n.w.	3	bc	...	29.683	63.3	53.3	51	...	1	...	Cum.	
6.	wb.	4	bc	...	29.728	58.8	52.3	64	...	2	...	Cum.	
8.	wb.	3	b	...	29.753	56.8	49.8	61	...	0	...	...	
10.	wb.	5	bq	...	29.822	56.8	49.8	61	...	0	...	...	
Midt.	w.n.w.	3	bq	...	29.845	55.3	48.8	63	...	0	...	...	
Totals.	...	35	...	...	8705	102.1	35.3	837	...	43	...	Cir str.	Cum.
Mean.	wb.	3	bc	...	29.725	58.5	52.9	69	...	4	...		

## THURSDAY, 21st.

2.	wb.	2	bc	...	29.829	53.8	48.8	69	...	2	...	Cum.	At Sydney. Temperature by self-registering thermometer, max. 67°, min. 52° 5.
4.	Calm.	0	bc	...	29.860	52.3	46.8	67	...	0	...	...	
6.	w.n.w.	1	bc	...	29.885	52.3	47.3	69	...	2	...	Cum.	
8.	swbw.	1	bc	...	29.938	53.3	48.8	72	...	2	...	Cum.	
10.	swbw.	1	bc	...	29.956	57.8	51.3	64	...	3	Cir.	Cum.	
Noon.	swbw.	1	bc	...	29.929	60.8	52.8	58	...	5	...	Cum.&Str.	
2.	wb.	1	bc	...	29.862	64.5	54.8	53	...	8	Str.	Cir cum.	
4.	wb.	1	bc	...	29.822	67.8	55.8	52	...	6	Str.	Cir cum.	
6.	wb.	1	bc	...	29.864	61.3	54.8	65	...	4	Str.	Cum.	
8.	swbw.	2	bc	...	29.874	56.8	49.3	59	...	3	...	Cir cum.	
10.	swbw.	1	bc	...	29.865	54.8	48.8	65	...	2	...	Cum.&Str.	
Midt.	swbw.	2	bc	...	29.797	54.8	48.8	65	...	2	...	Cum.&Str.	
Totals.	...	14	...	...	10481	88.3	8.1	758	...	39	Cir. & Str.	Cir Cum., Cum., & Str.	
Mean.	swbw.	1	bc	...	29.873	57.4	50.7	63	...	3	...		

FRIDAY, 22<sup>D</sup> MAY 1874.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw by s.	3	b	...	29.762	55.8	49.3	63	...	4	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 65°, min. 49° 55'.
4.	sw by s.	1	b	...	29.771	53.8	48.8	65	...	0	...	...	
6.	sw by s.	1	bc	...	29.769	53.8	49.8	70	...	3	...	Cum.	
8.	sw by s.	12	bc	...	29.779	55.8	49.8	65	...	12	...	Cum.	
10.	sw by w.	12	bc	...	29.799	59.3	50.3	53	...	1	...	Cum.	
Noon.	sw by w.	5	b	...	29.774	63.3	53.8	53	...	5	Cir.	Cum.	
2.	w by s.	3	bc	...	29.743	64.8	53.8	48	...	3	Cir.	Cum.	
4.	w by s.	5	bc	...	29.766	60.8	50.8	50	...	3	...	Cum.	
6.	w by s.	3	b	...	29.808	56.8	48.8	57	...	0	...	...	
8.	w by s.	4	b	...	29.845	55.8	47.8	56	...	0	...	...	
10.	w by s.	1	b	...	29.885	55.3	48.8	63	...	0	...	...	
Midt.	w by s.	2	b	...	29.925	54.5	47.8	61	...	0	...	...	
Totals.	...	32	bc	...	9626	89.8	119.6	704	...	21	Cir.	Cum.	
Mean.	sw by w.	3		...	29.802	57.5	50.0	59	...	2			

SATURDAY, 23<sup>D</sup>.

2.	w <sup>b</sup> s.	1	bl	...	29.966	53.8	47.8	64	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 65°·5, min. 48°·0.
4.	Calm.	0	b	...	30.000	52.8	47.8	69	...	0	...	...	
6.	w <sup>b</sup> s.	2	b	...	30.033	50.8	46.8	74	...	0	...	...	
8.	w.	1	b	...	30.065	51.8	46.8	69	...	0	...	...	
10.	w <sup>b</sup> s.	3	b	...	30.101	56.8	48.8	57	...	0	...	...	
Noon.	w <sup>b</sup> s.	1	bc	...	30.103	59.3	50.8	55	...	2	...	Cum.	
2.	w <sup>b</sup> s.	2	bc	...	30.098	63.3	53.3	51	...	2	Str.	Cum.	
4.	w <sup>b</sup> s.	1	bc	...	30.099	64.3	54.3	51	...	2	...	Cum.	
6.	w <sup>b</sup> s.	2	b	...	30.133	56.8	49.8	61	...	0	...	...	
8.	w <sup>b</sup> s.	3	b	...	30.148	53.8	47.8	64	...	0	...	...	
10.	w <sup>b</sup> s.	2	b	...	30.182	52.8	47.3	66	...	0	...	...	
Midt.	w <sup>b</sup> s.	2	b	...	30.203	52.0	46.8	68	...	0	...	...	
Totals.	...	20	bc	...	1131	68.3	108.1	749	...	6	Str.	Cum.	
Mean.	w <sup>b</sup> s.	2		...	30.094	55.7	49.0	62	...	1			

SUNDAY, 24<sup>TH</sup>.

2.	w <sup>bs</sup> .	2	bc	...	30.197	51.3	46.8	72	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 68°, min. 52°.
4.	w <sup>bs</sup> .	1	bcl	...	30.197	50.8	46.8	74	...	0	...	...	
6.	w <sup>bs</sup> .	1	b	...	30.206	50.8	46.8	74	...	0	...	...	
8.	w <sup>bs</sup> .	1	b	...	30.214	50.8	47.8	80	...	0	...	...	
10.	w <sup>bs</sup> .	1	b	...	30.198	59.8	52.8	62	...	0	...	...	
Noon.	w <sup>bs</sup> .	3	b	...	30.187	61.8	53.8	58	...	0	...	...	
2.	w <sup>bs</sup> .	2	b	...	30.132	65.5	55.3	50	...	0	...	...	
4.	w <sup>bs</sup> .	1	bc	...	30.134	67.8	56.8	49	...	1	...	Cum.	
6.	w <sup>bs</sup> .	2	b	...	30.157	59.8	52.8	62	...	0	...	...	
8.	w <sup>bs</sup> .	1	bc	...	30.217	57.3	51.8	68	...	4	...	Cm.&Str.	
10.	w <sup>bs</sup> .	2	bc	...	30.227	56.3	50.8	68	...	8	...	Cum str.	
Midt.	sw <sup>bw</sup> .	1	bc	...	30.244	56.8	51.3	68	...	9	...	Cm.&Str.	
Totals.	...	18	bc	...	2310	88.8	13.6	785	...	22	...	Cm.&Str.	
Mean.	w <sup>bs</sup> .	1		...	30.192	57.4	51.1	65	...	2			

## MONDAY, 25TH MAY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.s.w.	1	bc	...	30.252	58.8	51.3	59	...	4	...	Cum str.	At Sydney. Temperature by self-registering thermo- meter, max. 62°, min. 55°.
4.	w.s.w.	2	bcqp	...	30.263	56.8	52.8	75	...	5	...	Cum str.	
6.	swbw.	1	er	...	30.336	54.8	52.8	87	...	8	...	Cum str.	
8.	swbw.	1	cp	...	30.401	54.8	53.5	92	...	7	...	Cum str.	
10.	wbs.	1	cp	...	30.436	56.8	55.8	93	...	8	...	Cum str.	
Noon.	swbs.	2	cp	...	30.444	58.8	57.5	93	...	9	...	Cum str.	
2.	sw.	1	cp	...	30.435	60.8	58.8	88	...	8	...	Cum str.	
4.	swbs.	2	cp	...	30.434	59.8	58.0	90	...	7	...	Cum str.	
6.	wbs.	1	cp	...	30.437	56.8	54.8	87	...	8	...	Cum str.	
8.	wbs.	1	cp	...	30.484	56.8	56.3	97	...	10	...	Cum.	
10.	wbs.	1	cp	...	30.430	55.8	54.8	93	...	8	...	Cum.	
Midt.	wbs.	1	cp	...	30.515	54.8	55.0	100	...	7	...	Cum.	
Totals.	...	15	...	...	4867	85.6	61.4	1054	...	89	...	Cum. & Cum str.	
Mean.	w.s.w.	1	cp	...	30.406	57.1	55.1	88	...	7	...	Cum. & Cum str.	

## TUESDAY, 26TH.

2.	wbs.	1	crp	...	30.514	56.3	55.8	97	...	10	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 62°, min. 55°5.
4.	swbs.	1	crp	...	30.492	57.3	56.8	97	...	10	...	Cum.	
6.	wbs.	1	cp	...	30.500	56.5	55.0	90	...	9	...	Cum.	
8.	wbs.	1	be	...	30.520	56.3	55.8	97	...	5	...	Cum.	
10.	w.s.w.	1	er	...	30.538	58.8	57.8	94	...	8	...	Cum.&Str.	
Noon.	swbw.	1	er	...	30.537	58.8	57.8	94	...	7	...	Cum.	
2.	s.	1	bcp	...	30.510	60.5	59.3	93	...	8	...	Cum.	
4.	Calm.	0	be	...	30.499	60.8	58.8	88	...	5	...	Cum.&Str.	
6.	Calm.	0	be	...	30.504	59.8	57.8	88	...	8	...	Cum str.	
8.	Calm.	0	bep	...	30.502	59.5	57.8	90	...	6	...	Cum.&Str.	
10.	wbs.	1	bep	...	30.486	58.3	56.8	91	...	8	...	Cum str.	
Midt.	wbs.	1	be	...	30.512	57.3	56.3	94	...	9	...	Cum.	
Totals.	...	9	...	...	6114	100.2	85.8	33	...	93	...	Cum. & Str.	
Mean.	w.s.w.	1	bcp	...	30.509	58.4	57.1	93	...	8	...	Cum. & Str.	

## WEDNESDAY, 27TH.

2.	wbs.	1	c	...	30.513	56.8	56.3	97	...	8	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 61°, min. 54°.
4.	wbs.	1	c	...	30.487	56.8	56.3	97	...	9	...	Cum.	
6.	Calm.	0	c	...	30.490	55.8	55.8	100	...	9	...	Cum.	
8.	Calm.	0	qp	...	30.501	56.8	56.8	100	...	10	...	Cum.	
10.	w.	2	cp	...	30.517	57.8	56.8	93	...	9	...	Cum str.	
Noon.	wbs.	1	cp	...	30.476	57.8	56.8	93	...	10	...	Cum str.	
2.	s.s.w.	1	cp	...	30.447	59.3	58.3	94	...	9	...	Cum.	
4.	swbs.	1	cp	...	30.428	58.8	56.8	88	...	10	...	Cum.	
6.	Calm.	0	c	...	30.425	57.8	57.3	97	...	9	...	Cum.	
8.	swbs.	1	cp	...	30.435	57.3	56.8	97	...	10	...	Cum.	
10.	swbw.	1	cp	...	30.445	56.8	55.8	93	...	9	...	Cum.	
Midt.	swbw.	1	cp	...	30.418	56.8	55.8	93	...	10	...	Cum str.	
Totals.	...	10	...	...	5582	88.6	79.6	62	...	112	...	Cum. & Cum str.	
Mean.	swbw.	1	cp	...	30.465	57.4	56.6	95	...	9	...	Cum. & Cum str.	

THURSDAY, 28<sup>TH</sup> MAY 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 5.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.		Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	swbw.	1	bcp	...	30.430	56.3	55.8	97	...	8	...	Cum.		At Sydney. Temperature by self-registering thermo- meter, max. 69°, min. 52°.
4.	swbw.	1	bcp	...	30.384	55.8	55.3	97	...	12	...	Cum.		
6.	wbx.	1	bc	...	30.353	54.8	54.3	97	...	7	...	Cum.		
8.	wbx.	1	bc	...	30.362	55.8	54.8	93	...	8	...	Cum.		
10.	wbx.	1	bc	...	30.372	57.3	56.8	97	...	9	...	Cum.		
Noon.	wbx.	1	bcp	...	30.339	59.8	58.8	94	...	8	...	Cum.		
2.	s.	1	bcp	...	30.277	59.5	57.8	90	...	8	...	Cum.		
4.	s.s.e.	1	bcp	...	30.257	58.8	56.8	88	...	12	...	Cum.		
6.	Calm.	0	bc	...	30.237	58.8	56.8	88	...	8	...	Cm.&Str.		
8.	Calm.	0	bc	...	30.239	57.3	56.5	95	...	8	...	Cm.&Str.		
10.	wbx.	1	bc	...	30.248	56.8	55.8	93	...	8	...	Cm.&Str.		
Midd.	wbx.	1	bc	...	30.239	55.8	54.8	93	...	12	...	Cm.&Str.		
Totals.	...	10		...	3737	86.8	74.3	42	...	80	...			
			bcp	...							...	Cm.&Str.		
Mean.	w.s.w.	1		...	30.311	57.2	56.2	93	...	7	...			

FRIDAY, 29<sup>TH</sup>.

2.	wbx.	1	bc	...	30.202	55.0	52.8	86	...	8	Str.	Cm.&Str.		At Sydney. Temperature by self-registering thermo- meter, max. 65°, min. 50°.
4.	wbx.	1	bc	...	30.193	54.8	52.5	85	...	9	Cir.	Cir cum.		
6.	w.s.w.	1	bc	...	30.173	54.3	53.3	93	...	4	...	Cm.&Str.		
8.	wbx.	1	bc	...	30.194	54.8	53.5	91	...	5	...	Cm.&Str.		
10.	wbx.	1	bc	...	30.182	58.5	56.8	89	...	4	Cir.	Cm.&Str.		
Noon.	wbx.	1	bc	...	30.156	60.3	57.8	85	...	5	Cir.	Cm.&Str.		
2.	wbx.	1	bc	...	30.129	62.8	55.8	63	...	4	Cir.	Cm.&Str.		
4.	Calm.	0	bc	...	30.093	61.8	56.8	72	...	5	Cir.	Cm.&Str.		
6.	Calm.	0	bc	...	30.062	59.8	56.3	79	...	3	...	Cm.&Str.		
8.	Calm.	0	bc	...	30.098	57.8	55.8	87	...	2	...	Cm.&Str.		
10.	Calm.	0	bc	...	30.119	57.3	55.3	87	...	7	...	Cm.&Str.		
Midd.	wbx.	1	bc	...	30.104	55.8	52.8	81	...	6	...	Cm.&Str.		
Totals.	...	8		...	1705	93.0	59.5	998	...	68	...			
			bc	...							Cir.	Cm.&Str.		
Mean.	wbx.	1		...	30.142	57.7	54.9	83	...	6	...			

SATURDAY, 30<sup>TH</sup>.

2.	wbx.	1	bc	...	30.099	53.8	51.3	83	...	6	Cir.	Cm.&Str.		At Sydney. Temperature by self-registering thermo- meter, max. 64°, min. 50°.
4.	wbx.	2	bc	...	30.085	51.8	47.8	74	...	9	Cir.	Cm.&Str.		
6.	wbx.	1	bc	...	30.048	51.8	47.8	74	...	8	Cir.	Cm.&Str.		
8.	wbx.	2	bc	...	30.074	51.8	47.8	74	...	9	...	Cm.&Str.		
10.	wbx.	1	bc	...	30.067	54.8	51.8	81	...	8	...	Cm.&Str.		
Noon.	wbx.	1	bc	...	30.045	56.3	53.3	81	...	9	...	Cm.&Str.		
2.	wbx.	1	bc	...	30.016	60.8	56.5	76	...	6	Cir.	Cm.&Str.		
4.	wbx.	1	bc	...	29.999	61.5	57.5	80	...	7	Cir.	Cum.		
6.	wbx.	1	bc	...	29.999	56.8	54.8	87	...	9	Cir.	Cm.&Str.		
8.	wbx.	1	bc	...	30.019	56.8	54.3	84	...	8	Cir.	Cum.		
10.	wbx.	1	bc	...	30.044	55.8	52.8	81	...	4	...	Cm.&Str.		
Midd.	Calm.	0	bc	...	30.042	54.8	52.3	84	...	2	...	Cm.&Str.		
Totals.	...	13		...	537	66.8	28.0	119	...	85	...			
			bc	...							Cir.	Cm.&Str.		
Mean.	wbx.	1		...	30.045	55.6	52.3	80	...	7	...			

## SUNDAY, 31st May 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds (0 to 10).	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wbs.	1	bc	...	30.038	52.8	50.8	87	...	5	Str.	Cum.	
4.	Calm.	0	bc	...	30.032	51.8	49.8	87	...	4	Str.	Cum.	
6.	wbs.	1	bc	...	30.013	52.8	51.3	90	...	7	...	Cum.	
8.	wbs.	1	c	...	30.023	52.3	51.3	93	...	9	...	Cum.	
10.	wnbs.	1	or	...	30.026	53.8	52.8	93	...	10	...	Cum.	
Noon.	wbs.	1	c	...	30.038	54.8	54.3	97	...	8	...	Cum.	
2.	swbw.	1	or	...	30.026	57.8	56.3	90	...	10	...	Cum.	
4.	Calm.	0	cr	...	30.022	55.8	55.3	97	...	9	...	Cum.	
6.	swbs.	2	cr	...	30.036	55.8	55.3	97	...	10	...	Cum.	
8.	swbw.	1	cp	...	30.062	55.8	55.8	100	...	8	...	Cum.	
10.	Calm.	0	cp	...	30.070	54.8	54.3	97	...	9	Str.	Cum.	
Midt.	wbs.	1	bc	...	30.077	53.8	52.8	93	...	7	Cir str.	Cum.	
Totals.	...	10	cpr	...	463	52.1	40.1	41	...	96	Cir. & Str.	Cum.	
Mean.	w.	1		...	30.039	54.3	53.3	93	...	8			

## MONDAY, 1st JUNE.

2.	w <sup>b</sup> N.	1	be	...	30.100	51.8	50.8	93	...	3	...	Cm.&Str.	At Sydney. Temperature by self-registering thermo- meter, max. 67°, min. 46°.
4.	w <sup>b</sup> N.	1	be	...	30.103	50.8	49.3	90	...	3	...	Cm.&Str.	
6.	w <sup>b</sup> N.	1	be	...	30.116	49.8	47.8	86	...	3	...	Cm.&Str.	
8.	w <sup>b</sup> N.	1	be	...	30.150	51.3	48.8	83	...	4	...	Cm.&Str.	
10.	sw <sup>b</sup> s.	2	be	...	30.234	56.8	52.8	75	...	3	...	Cum.	
Noon.	sw <sup>b</sup> s.	3	be	...	30.241	58.3	52.8	69	...	4	...	Cum.	
2.	s.s.w.	3	be	...	30.222	58.8	53.3	68	...	3	...	Cum.	
4.	s.s.w.	1	be	...	30.230	59.8	53.8	66	...	4	...	Cum.	
6.	s.s.w.	1	be	...	30.271	55.8	51.3	72	...	7	Str.	Cum.	
8.	sw <sup>b</sup> w.	1	be	...	30.293	54.8	50.8	75	...	5	...	Cum.	
10.	sw <sup>b</sup> w.	1	be	...	30.303	52.8	49.8	80	...	3	...	Cum.	
Midt.	w <sup>b</sup> N.	1	be	...	30.312	50.8	48.8	86	...	3	...	Cum.	
Totals.	...	17	be	...	2575	51.6	10.1	943	...	45	Str.	Cum. & Str.	
Mean.	w.s.w.	1		...	30.215	54.3	50.8	79	...	4			

## TUESDAY 2d.

2.	w <sup>b</sup> N.	1	bc	...	30.351	50.3	47.8	83	...	1	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 66°, min. 45°.
4.	w.	1	bc	...	30.365	48.8	46.8	86	...	3	...	Cum.	
6.	w <sup>b</sup> N.	1	bc	...	30.377	47.8	45.8	86	...	2	...	Cum.	
8.	w <sup>b</sup> N.	1	bc	...	30.413	49.8	46.8	80	...	3	...	Cm.&Str.	
10.	w <sup>b</sup> N.	1	b	...	30.441	53.3	49.3	74	...	0	...	...	
Noon.	w <sup>b</sup> N.	1	b	...	30.434	56.8	53.8	81	...	0	...	...	
2.	w <sup>b</sup> N.	1	b	...	30.381	65.8	57.8	60	...	0	...	...	
4.	Calm.	0	b	...	30.368	64.3	57.3	63	...	0	...	...	
6.	Calm.	0	b	...	30.382	57.8	54.8	81	...	0	...	...	
8.	Calm.	0	b	...	30.390	54.8	52.8	87	...	0	...	...	
10.	Calm.	0	b	...	30.396	52.8	50.8	86	...	0	...	...	
Midt.	Calm.	0	b	...	30.390	51.8	49.8	86	...	0	...	...	
Totals.	...	...	bc	...	4688	654.1	13.6	953	...	9	...	Cm.&Str.	
Mean.	w <sup>b</sup> N.	1		...	30.391	54.5	51.9	79	...	1			

## WEDNESDAY, 3d JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Vble.	1	b	...	30.404	49.8	46.8	80	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 65°, min. 45° 5.
4.	w.b.s.	1	b	...	30.390	48.8	47.8	93	...	0	...	...	
6.	w.b.s.	1	b	...	30.382	48.3	46.8	90	...	0	...	...	
8.	w.b.s.	1	b	...	30.412	51.3	47.8	77	...	0	...	...	
10.	w.b.s.	2	b	...	30.410	55.8	52.8	81	...	0	...	...	
Noon.	w.b.s.	3	bc	...	30.386	57.5	52.8	72	...	12	Cir.	Cum.&Str.	
2.	w.b.s.	2	bc	...	30.338	61.8	53.8	58	...	12	...	Cum.&Str.	
4.	w.b.s.	1	b	...	30.335	61.8	54.8	62	...	0	...	...	
6.	Calm.	0	bc	...	30.351	57.8	54.8	81	...	12	...	Cum.	
8.	Calm.	0	bc	...	30.393	54.8	51.8	81	...	12	...	Cum.&Str.	
10.	Calm.	0	bc	...	30.406	51.8	49.8	86	...	12	...	Str.	
Midt.	w.b.s.	1	bc	...	30.404	50.3	48.8	90	...	1	...	Str.	
Totals.	...	13	bc	...	4611	649.8	8.6	951	...	12	Cir.	Cum. & Str.	
Mean.	w.b.s.	1		...	30.384	54.1	50.7	79	...	1			

## THURSDAY, 4th.

2.	w.b.s.	1	b	...	30.394	50.3	48.3	86	...	0	...	...	At Sydney. Temperature by self-registering thermo- meter, max. 67°, min. 45°.
4.	w.b.s.	2	b	...	30.387	49.3	47.3	86	...	0	...	...	
6.	w.b.s.	1	b	...	30.385	47.8	46.8	93	...	0	...	...	
8.	w.b.s.	1	bc	...	30.409	49.5	45.8	75	...	1	...	Cum.&Str.	
10.	w.b.s.	2	bc	...	30.414	50.8	48.8	86	...	3	Cir str.	...	
Noon.	w.b.s.	1	bc	...	30.361	56.0	52.8	80	...	8	Cir.	Cum.&Str.	
2.	w.b.s.	1	bc	...	30.326	65.5	59.5	68	...	6	Cir str.	Cum.&Str.	
4.	w.b.s.	1	bc	...	30.319	62.8	57.8	72	...	5	Cir str.	Cum.&Str.	
6.	Calm.	0	bc	...	30.320	58.8	55.8	82	...	4	...	Cum.&Str.	
8.	Calm.	0	bc	...	30.336	54.8	52.8	87	...	3	Str.	Cum.	
10.	w.b.s.	2	bc	...	30.351	50.8	48.0	81	...	4	Str.	Cum.	
Midt.	sw.b.w.	1	bc	...	30.371	50.8	47.8	80	...	2	...	Cum.	
Totals.	...	13	bc	...	4373	647.2	11.5	976	...	36	Cir str.	Cum. & Str.	
Mean.	w.b.s.	1		...	30.364	53.9	51.0	81	...	3			

## FRIDAY, 5th.

2.	Calm.	0	bc	...	30.369	49.8	46.8	80	...	3	...	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 65°, min. 48° 5.
4.	Calm.	0	bc	...	30.367	48.8	46.8	86	...	2	...	Cum.	
6.	w.b.s.	1	bc	...	30.350	48.3	46.8	90	...	3	...	Cum.&Str.	
8.	w.b.s.	1	bc	...	30.362	47.8	45.8	86	...	2	...	Cum.&Str.	
10.	w.b.s.	2	b	...	30.307	50.8	48.8	86	...	0	...	...	
Noon.	w.b.s.	1	bc	...	30.381	57.8	53.8	76	...	12	Cir.	...	
2.	Calm.	0	bc	...	30.301	61.8	58.0	78	...	7	Cir.	Cum.	
4.	NE by E.	1	bc	...	30.276	60.8	56.8	77	...	5	...	Cum.	
6.	Calm.	0	bc	...	30.290	57.8	55.8	87	...	3	Str.	Cum.	
8.	Calm.	0	bc	...	30.309	57.3	54.8	84	...	4	Str.	Cum.	
10.	Calm.	0	bc	...	30.309	52.8	51.8	93	...	7	Str.	Cum.	
Midt.	w.b.s.	1	bc	...	30.308	52.3	50.8	90	...	3	Str.	Cum.	
Totals.	...	7	bc	...	4019	646.1	16.8	1013	...	41	Cir. & Str.	Cum. & Str.	
Mean.	Variable.	1		...	30.335	53.8	51.4	84	...	3			

Upper clouds from eastward.

SATURDAY, 6TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w <sup>b</sup> N.	1	bc	...	30-287	50-8	49-8	93	...	9	Cir.	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 67°-2, min. 49°-0.
4.	w <sup>b</sup> N.	2	bc	...	30-298	50-8	49-3	90	...	8	Cir.	Cum.	
6.	w <sup>b</sup> N.	1	bc	...	30-295	49-8	48-3	90	...	4	Cir str.	Cum.	
8.	w <sup>b</sup> N.	1	bc	...	30-298	49-8	48-8	93	...	6	Cir str.	Cum.	
10.	w <sup>b</sup> N.	1	bc	...	30-299	53-3	50-3	80	...	5	Str.	Cum.	
Noon.	Calu.	0	bc	...	30-247	57-3	55-8	90	...	7	Str.	Cum.	
2.	N <sup>b</sup> E.	1	bc	...	30-175	64-8	57-8	63	...	2	Cir str.	...	
4.	N <sup>b</sup> E.	1	bc	...	30-158	64-3	57-8	65	...	2	Cir.	...	
6.	N. N. E.	1	bc	...	30-153	61-8	50-3	70	...	3	Cir.	...	
8.	N <sup>b</sup> E.	1	b	...	30-154	58-8	54-8	76	...	0	...	...	
10.	N <sup>b</sup> E.	1	bc	...	30-169	58-8	54-3	73	...	4	...	Cum.	
Midt.	N <sup>b</sup> E.	2	bc	...	30-143	57-8	53-8	76	...	4	...	Cm & Cum. st	
Totals.	...	13	bc	...	-2676	678-1	37-1	959	...	54	Cir str.	Cum.	
Mean.	sw <sup>b</sup> N.	1		...	30-223	56-5	53-1	80	...	5			

SUNDAY, 7TH.

2.	n <sup>b</sup> e.	2	be	...	30-102	57-5	53-8	77	...	7	Cir.	Cum.	At Sydney. Temperature by self-registering thermo- meter, max. 68°·5, min. 52°·5.
4.	Calm.	0	be	...	30-085	57-5	53-8	77	...	6	Cir cum.	Cum.	
6.	Calm.	0	be	...	30-079	56-3	53-8	84	...	8	Cir str.	Cum.	
8.	n <sup>b</sup> w.	1	be	...	30-075	57-3	54-3	81	...	7	...	Cin.&Str.	
10.	nw <sup>b</sup> n.	2	be	...	30-049	61-3	56-3	72	...	7	...	Cin.&Str.	
Noon.	nw <sup>b</sup> n.	3	be	...	29-985	62-8	56-8	67	...	8	...	Cum.	
2.	nw <sup>b</sup> n.	2	be	...	29-883	68-0	60-3	61	...	7	...	Cin.&Str.	
4.	nw <sup>b</sup> n.	1	be	...	29-903	66-8	59-8	64	...	4	...	Cum.	
6.	Calm.	0	be	...	29-913	63-3	59-8	80	...	3	...	Cum.	
8.	Calm.	0	b	...	29-982	61-3	57-3	77	...	0	...	...	
10.	w <sup>b</sup> n.	1	b	...	29-957	57-8	53-8	76	...	0	...	...	
Midt.	nw <sup>b</sup> n.	2	be	...	29-957	57-3	50-8	63	...	4	...	Cum.	
Totals.	...	14	be	...	11970	727-2	70-6	879	...	61	Cir cum.	Cum. & Str.	
Mean.	nw <sup>b</sup> n.	1		...	29-998	60-6	55-9	73	...	5			

MONDAY, 8TH.

2.	Calm.	0	bc	...	29-959	54-8	49-8	70	...	2	...	Cum.	At Sydney. Temperature by self-registering thermometer, max. 66°, min. 53°.
4.	w.b.N.	1	bc	...	29-958	54-3	49-8	72	...	5	Str.	Cum.	
6.	w.b.N.	1	bc	...	29-964	53-8	49-3	71	...	2	...	Cum.	
8.	w.s.w.	1	bc	...	29-988	54-8	49-8	70	...	1	Cir str.	...	4.30 P.M., left Sydney harbour.
10.	w.b.N.	2	bc	...	30-001	58-8	52-3	63	...	2	...	Cum.	
Noon.	w.b.N.	5	bc	...	29-956	61-8	58-8	58	...	3	...	Cum.	
2.	w.b.N.	4	bc	...	29-962	63-8	54-8	55	...	4	Cir.	Cum.	
4.	w.b.N.	2	bc	...	29-968	61-8	53-8	58	63-2	6	...	Cum.	
6.	w.b.	3	bc	...	30-049	59-8	52-8	62	66-0	2	...	Str.	
8.	w.b.	...	bc	...	30-105	57-8	51-5	65	65-5	1	...	Str.	Midnight, long S.E. swell.
10.	w.s.w.	6	bc	...	30-125	57-3	51-8	68	66-2	2	...	Cum.	
Midt.	swbw.	7	cpd	3	30-125	57-3	51-8	68	67-0	9	...	Cum.	
Totals.	...	32	bc	...	160	96-1	26-3	780	28-9	39	...	Cum. & Str.	
Mean.	w.	3		3	30-013	58-0	52-2	65	65-8	3	Cir str.		

## TUESDAY, 9th JUNE 1871.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32 and Sea Level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbs.	6	bcq	4	30.106	56.8	52.3	72	67.5	6	...	Cum.	At Sydney.
4.	swbs.	7	bcq	3	30.107	56.8	52.3	72	67.5	8	Str.	Cum.	Temperature by self-registering thermo-
6.	swbw.	6	bcq	3	30.161	53.8	49.3	71	67.5	12	...	Cum.&Nb.	meter, max. 55°5, min. 50°0.
8.	swb.	7	bcq	4	30.175	55.8	53.8	87	67.5	8	...	Cum.&Nb.	
10.	swbs.	8	bcq	3	30.212	57.3	53.3	75	67.0	7	...	Cum.&Nb.	Returned to Sydney, being unable to
Noon.	swbs.	6	bcq	4	30.210	56.8	54.3	84	67.0	7	...	Cum.	sound owing to bad weather.
2.	s.s.w.	9	bcq	5	30.153	57.3	54.3	81	66.5	9	...	Cum.&Cumst.	Heavy southerly squalls.
4.	swb.	6	bcq	...	30.225	54.8	51.3	97	...	9	...	Cum.&Cumst.	
6.	swbs.	6	cqr	...	30.244	52.8	51.8	93	...	10	...	Cum.&Nb.	
8.	s.s.w.	3	cqr	...	30.282	52.8	51.8	93	...	9	...	Str.&Nb.	4.30 p.m., anchored in Watson's bay,
10.	s.s.w.	3	cqr	...	30.290	50.8	49.8	93	...	10	...	Nimb.	Port Jackson.
Midt.	swbs.	4	cqr	...	30.263	51.8	50.8	93	...	10	...	Cum.&Nb.	
Totals.	...	71	bcqpr	26	2428	57.6	58.1	1011	50.5	94	Str.	Cum str. & Nimb.	
Mean.	swbs.	6		4	30.202	54.8	52.3	84	67.2	8			

## WEDNESDAY, 10th.

2.	swbw.	5	cq	...	30.226	53.8	52.8	93	...	10	...	Cum.&Nb.	At Sydney.
4.	wbs.	2	cqp	...	30.218	52.3	51.8	97	...	8	...	Cum str.	Temperature by self-registering thermo-
6.	wbs.	3	cqp	...	30.220	52.3	51.8	97	...	10	...	Cum.&Nb.	meter, max. 56°7, min. 52°2.
8.	swbw.	1	cp	...	30.254	52.8	52.0	95	...	8	...	Cum.&Nb.	
10.	swbw.	4	bcq	...	30.254	56.3	54.3	87	...	6	...	Cum.&Nb.	Clouds from S.E.
Noon.	s.w.	2	bcq	...	30.217	56.3	54.3	76	...	7	...	Cum.&Nb.	
2.	s.s.w.	5	cqp	...	30.141	57.8	56.8	93	...	9	...	Cum.&Nb.	Lower scud flying rapidly over.
4.	s.s.w.	4	cq	...	30.143	57.8	56.3	90	...	7	...	Cum str.	
6.	swb.	2	or	...	30.155	55.8	55.3	97	...	10	...	Nimb.	
8.	swbw.	1	or	...	30.157	53.3	51.8	90	...	10	...	Cum.&Nb.	
10.	swbw.	3	cq	...	30.155	53.3	52.8	97	...	7	...	Nimb.	Midt., squally with rain
Midt.	swb.	5	cqp	...	30.147	53.8	52.8	93	...	8	...	Nimb.	
Totals.	...	37	bcqpr	...	2287	57.6	42.8	1105	...	100	...	Cum. Nimb.	
Mean.	s.w.	3		...	30.191	54.8	53.6	92	...	8			

## THURSDAY, 11th.

2.	swbw.	3	cqr	...	30.111	54.8	54.3	97	...	10	...	Nimb.	At Sydney.
4.	s.w.	6	cqp	...	30.071	56.3	55.8	97	...	9	...	Cum.	Temperature by self-registering thermo-
6.	swbs.	4	cqr	...	30.079	54.8	54.3	97	...	10	...	Str.	meter, max. 60°, min. 53°5.
8.	wbs.	2	cqr	...	30.098	53.8	52.8	93	...	10	...	Cum.&Str.	
10.	swbw.	2	cqp	...	30.100	55.8	54.8	93	...	9	...	Cum str.	
Noon.	wbs.	2	or	...	30.082	55.3	54.8	97	...	10	...	Cum str.	
2.	s.	3	bcq	...	30.028	57.8	56.8	93	...	7	...	Cum str.	
4.	swbw.	2	bc	...	30.027	57.8	56.8	93	...	6	...	Cum str.	
6.	spbs.	3	cq	...	30.028	58.8	56.8	88	...	9	...	Cum.	
8.	spbs.	1	cp	...	30.049	56.8	55.8	93	...	8	...	Cum.&Cumst.	
10.	swbw.	2	cp	...	30.052	56.8	55.8	93	...	9	Str.	Cum.	
Midt.	swbw.	1	c	...	30.047	54.8	54.3	97	...	8	...	Cum.	
Totals.	...	32	cqp	...	772	73.6	63.1	51	...	105	Str.	Cum. & Cum str.	
Mean.	swbs.	3		...	30.064	56.1	55.3	94	...	9			

## FRIDAY, 12TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb.w.	2	cp	...	30.032	55.3	54.8	97	...	9	...	Cum.	At noon, lat. 33° 57' s. long. 151° 39' E. Temperature by self-registering thermometer, max. 64°, min. 53° 5.
4.	swb.w.	3	cip	...	30.043	54.8	54.8	100	...	8	...	Cm.&Nb.	
6.	swb.w.	1	or	...	30.028	55.8	54.8	93	...	10	...	Nimb.	
8.	...	...	...	...	...	...	...	...	62.5	...	...	...	S.A.M., left Watson's bay, Port Jackson. Long. s.e. swell. Misty over land. Sp. gr. 1.02650.
10.	s.e.s.	1	hep	...	30.031	58.3	56.8	90	66.2	8	...	Cm.&Cmst.	
Noon.	e.s.	3	bc	1	30.002	61.8	57.3	75	68.0	6	Cir.cum.	Cum.	
2.	e.s.	3	bc	...	29.931	62.3	57.8	75	70.2	6	Cir.	Cum str.	Thick to westward, with occasional flashes of lightning.
4.	e.s.	4	bc	...	29.912	60.8	58.3	85	70.0	6	...	Cum str.	
6.	e.s.	4	bc	...	29.921	61.8	57.8	77	69.5	6	...	Cum str.	
8.	e.s.	5	bc	...	29.903	62.8	59.8	82	70.2	9	...	Cm.&Nb.	
10.	e.s.	6	cip	3	29.861	62.0	59.3	84	70.2	3	...	Cum.	
Midt.	e.s.	7	heq	4	29.809	62.3	60.3	88	70.5	8	...	Cum str.	
Totals.	...	36	...	8	10473	658.0	81.8	946	617.3	79	Cir. & Cir.cum.	Cum. & Nimb.	
Mean.	s. E.	3	heq	3	29.952	59.8	57.4	86	68.6	7			

## SATURDAY, 13TH.

2.	nb.s.	7	cip	2	29.748	62.8	60.8	88	70.5	8	...	Cm.st.&Nb.	At noon, lat. 34° 13' s. long. 151° 38' E. Temperature by self-registering thermometer, max. 62°, min. 57°.
4.	swb.w.	3	heq	...	29.690	61.8	59.8	88	70.7	7	...	Cm.st.&Nb.	
6.	swb.w.	5	bc	...	29.723	61.3	58.8	85	70.2	6	...	Cm.st.&Nb.	
8.	wb.s.	4	bc	3	29.740	59.3	55.8	79	70.2	8	Str.	Cum str.	Current, s. 33°. Continuous rain and wind squalls from midnight to 4 A.M.
10.	wb.s.	5	bc	...	29.743	57.8	53.3	74	70.0	2	...	Cum.	
Noon.	wb.s.	5	bc	...	29.689	57.5	52.5	70	69.0	1	...	Cum.	
2.	wb.s.	5	bc	3	29.633	58.3	54.8	78	67.5	4	...	Cum.	Sp. gr. 1.02642.
4.	swb.w.	5	bc	3	29.620	59.8	53.3	64	67.0	5	...	Cum.	
6.	N.W.	4	bc	...	29.610	58.8	53.8	71	69.7	1	...	Sin.cum.	
8.	swb.w.	5	b	3	29.610	58.3	53.8	74	70.0	0	...	...	
10.	N.W.	7	bc	4	29.586	58.5	53.8	73	69.2	2	...	Cum.	
Midt.	N.W.	5	bc	3	29.547	58.3	54.0	75	69.0	4	...	Cum.	
Totals.	...	60	...	21	7939	712.5	64.5	919	833.0	48	Str.	Cum., Cum str., & Nimb.	
Mean.	N.W.	5	heq	3	29.662	59.4	55.4	77	69.4	4			

## SUNDAY, 14TH.

2.	swb.w.	7	bc	3	29.505	57.8	53.8	76	69.0	4	...	Cum.	At noon, lat. 34° 3' s. long. 152° 20' E. Temperature by self-registering thermometer, max. 60°, min. 53° 5.
4.	swb.w.	6	bc	4	29.472	56.8	52.8	75	69.0	7	...	Cum.	
6.	swb.w.	8	bc	3	29.439	55.8	52.8	81	69.0	7	Cir.	Cum.	
8.	swb.w.	6	bc	3	29.477	56.8	53.3	78	69.0	8	Cir.	Cum.	Current, s. 34°.
10.	w.s.w.	7	cip	3	29.479	54.8	53.3	90	67.0	9	...	Cm.&Nb.	
Noon.	w.s.w.	9	cip	...	29.452	57.8	54.8	81	67.7	9	...	Cm.&Nb.	
2.	w.s.w.	6	cip	...	29.436	58.5	56.5	87	67.5	9	...	Cm.&Nb.	Sudden rain squalls, lightning to northward. Sea phosphorescent.
4.	swb.w.	7	cip	4	29.455	57.8	56.0	88	67.5	10	...	Cm.&Nb.	
6.	s.s.w.	9	cip	4	29.432	58.8	57.3	91	67.0	9	...	Cm.st.&Nb.	
8.	s.w.	7	bc	4	29.442	60.8	58.3	85	66.8	7	...	Cm.&Nb.	
10.	s.s.w.	6	heq	4	29.451	59.8	57.8	88	64.5	8	...	Cm.&Nb.	
Midt.	s.s.w.	8	bc	4	29.463	59.8	56.8	82	63.0	6	...	Cm.&Nb.	
Totals.	...	86	...	36	5503	95.3	63.5	1002	87.0	93	Cir.	Cum., Cum str., & Nimb.	
Mean.	w.s.w.	7	cip	4	29.459	57.9	55.3	83	67.2	8			

## MONDAY, 15TH JUNE 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbs.	9	bcq	...	29.120	60.3	56.8	79	63.0	2	...	Cum.	At noon, lat. 34° 0' S. long. 155° 12' E. Temperature by self-registering thermo- meter, max. 62°, min. 56°.
4.	swbs.	7	cyp	5	29.122	58.5	56.8	88	63.0	8	...	Cum.	
6.	swbs.	8	bcq	...	29.120	59.3	56.3	82	63.0	8	...	Cm.&Nb.	Current, S. 30° E. 15'. Heavy squalls between 2 and 3 A.M., after which the weather moderated. Sp. gr. 1.02645.
8.	swbs.	12	bcq	3	29.124	59.8	56.8	82	62.7	8	...	Cm.&Nb.	
10.	swbs.	7	bcq	5	29.114	59.8	56.8	82	62.7	5	...	Cm.&Str.	Sp. gr. 1.02645.
Noon.	s.w.	7	bcq	1	29.116	58.8	56.8	88	62.7	5	Cir cum.	Cm.&Str.	
2.	swbs.	8	bcq	4	29.114	60.3	56.8	79	63.0	6	...	Cum.	Sp. gr. 1.02645.
4.	swbs.	6	bcq	4	29.113	59.3	57.3	88	64.0	8	...	Cm.&Nb.	
6.	swbs.	7	bcq	5	29.119	60.8	58.8	88	64.0	8	...	Cum.	Sp. gr. 1.02645.
8.	swbs.	4	bcq	4	29.119	60.5	58.0	85	64.5	5	...	Cm.&Str.	
10.	sw.	6	bcq	3	29.108	58.8	56.8	88	64.0	4	...	Cm.&Str.	Sp. gr. 1.02645.
Milt.	sw.	4	bcq	2	29.103	58.8	57.3	91	64.0	7	...	Cum str.	
Totals.	...	76	bcq	41	65.55	115.0	85.3	1020	40.6	74	...	Cum. & Str.	
Mean.	swbs.	6	bcq	4	29.146	59.6	57.1	85	63.4	6	...	Cum. & Str.	

## TUESDAY, 16TH.

2.	sw.	5	bcqd	3	29.814	58.3	56.8	90	64.0	7	...	Cm.&Nb.	At noon, lat. 34° 27' S. long. 154° 57' E. Temperature by self-registering thermo- meter, max. 62° 5, min. 56° 5.
4.	sw.	3	cyp	3	29.840	57.8	55.8	87	64.0	9	...	Cm.&Nb.	
6.	s.	5	cyp	...	29.888	57.8	56.8	93	64.0	10	...	Cm.&Nb.	Current, S. 20° E. 27'.
8.	s.E.	2	cyp	...	29.937	58.3	55.8	84	64.0	8	...	Cm.&Nb.	
10.	s.E.	3	bc	3	29.975	59.8	55.8	76	64.2	6	...	Cir.	Sp. gr. 1.02648.
Noon.	s.E.	1	bc	2	29.964	59.8	55.8	76	63.5	8	...	Cir.	
2.	s.	2	bcq	2	29.961	59.3	55.8	79	63.0	6	...	Cir str.	Sp. gr. 1.02648.
4.	s.	1	bcq	1	29.939	60.0	56.3	78	63.2	9	...	Cir. & Str.	
6.	s.	3	bc	...	29.904	59.8	55.8	76	63.0	7	...	Cir cum.	Sp. gr. 1.02648.
8.	s.E.	2	bcq	...	29.924	58.3	56.0	85	63.0	8	...	Cum.	
10.	s.E.	3	bc	...	29.953	58.3	53.8	74	64.0	3	...	Cum.	Sp. gr. 1.02648.
Milt.	s.s.E.	2	bc	...	29.964	58.3	53.8	74	63.5	6	...	Cum.	
Totals.	...	32	bcq	14	115.23	105.8	68.3	972	43.4	87	...	Cir., Str. & Cum.	
Mean.	s.E.	3	bcq	2	29.960	58.8	55.7	81	63.6	7	...	Cum. & Nimb.	

## WEDNESDAY, 17TH.

2.	s.s.E.	2	bcq	...	30.051	58.8	53.8	71	64.0	6	...	Cm.&Str.	At noon, lat. 34° 50' S. long. 155° 28' E. Temperature by self-registering thermo- meter, max. 61°, min. 55° 5.
4.	s.s.E.	5	bcq	...	30.057	58.8	54.8	76	64.0	4	...	Cm.&Str.	
6.	s.E.	3	bcq	...	30.082	58.8	54.8	76	64.0	8	...	Cum.	Current, S. 65° W. 25'. Birds seen were albatross, prion, white breasted petrel and Cape pigeon. Sp. gr. 1.02645.
8.	s.E.	4	bc	2	30.120	58.8	54.8	76	64.0	6	...	Cir cum.	
10.	s.E.	3	bc	...	30.152	58.3	55.3	81	64.5	7	...	Cum.	Sp. gr. 1.02645.
Noon.	s.E.	2	bc	...	30.147	59.5	55.5	76	64.5	5	...	Cum.	
2.	sw.	3	bc	2	30.100	60.8	55.8	72	64.2	6	...	Cum.	Sp. gr. 1.02645.
4.	sw.	3	bc	2	30.099	60.2	55.8	75	64.2	5	...	Cum.	
6.	s.E.	4	bcq	2	30.108	59.3	55.8	79	64.2	5	...	Cm.&Str.	Sp. gr. 1.02645.
8.	s.E.	4	bcq	3	30.145	58.3	55.3	81	64.0	8	...	Cm.&Str.	
10.	s.E.	2	bcq	3	30.159	58.8	55.8	82	64.0	5	...	Cum.	Sp. gr. 1.02645.
Milt.	s.E.	3	bc	3	30.153	58.5	55.8	83	64.0	4	...	Cm.&Nb.	
Totals.	...	38	bcq	17	137.3	108.9	63.3	928	49.6	69	...	Cum., Str. & Nimb.	
Mean.	s.E.	3	bcq	2	30.114	59.1	55.3	77	64.1	6	...	Cum. & Nimb.	

## THURSDAY, 18TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S. E.	2	bc	1	30.124	58.8	55.8	82	64.0	3	...	Cum.	At noon, lat. 34° 42' S. long. 156° 19' E. Temperature by self-registering thermo- meter, max. 62°, min. 55°. Current, S. 15° W. 16'. 3.45 A.M., wind fell and shifted to S.W. for a short time. 6.40 A.M., observed a brilliant meteor. Long swell from S.E. Sp. gr. 1.02646
4.	S.S.E.	4	bcpq	1	30.106	56.8	54.3	84	64.0	7	...	Cum.	
6.	S.W.	1	bc	1	30.148	57.8	54.8	81	64.0	3	...	Cum.	
8.	S.E.	12	bc	...	30.150	57.8	53.8	76	64.0	12	Cir cum.	Str.	
10.	S.S.E.	1	bc	...	30.170	58.8	55.3	79	64.0	4	...	Cum.	
Noon.	S.E.	12	bc	1	30.170	59.8	54.8	71	64.5	4	...	Cum.	
2.	S.S.E.	12	bcpq	1	30.133	61.0	55.8	71	64.5	6	...	Cum.	
4.	S.E.	3	bc	...	30.136	59.8	55.8	76	64.0	4	Cir.	Cum.	
6.	S.E.	1	bc	...	30.143	59.8	54.8	71	64.0	...	...	Cum.	
8.	S.E.S.	3	bc	1	30.157	57.8	54.8	81	63.7	3	...	Cum.	
10.	S.E.S.	1	bc	...	30.169	57.8	54.3	78	63.7	...	...	Cm.&Str.	
Midt.	S.E.S.	2	bcp	...	30.170	57.8	53.8	76	63.7	6	...	Cum.	
Totals.	...	24	bcpq	6	1776	103.8	58.1	926	1	42	Cir cum.	Cum.	
Mean.	S.S.E.	2		1	30.148	58.6	54.8	77	64.0	4			

## FRIDAY, 19TH.

2.	S.E.S.	1	bcp	2	39.170	57.8	53.8	76	64.2	4	...	Cum.	At noon, lat. 36° 39' s. long. 158° 10' E. Temperature by self-registering thermo- meter, max. 60°, min. 55°. Current, s. 60° E. 14'. Sp. gr. 1.02643.
4.	S.E.S.	3	bc	2	30.153	56.8	53.5	79	64.5	6	...	Cum.	
6.	S.E.E.	2	bcp	1	30.160	56.8	53.8	81	63.7	6	...	Cm.&Cms	
8.	S.E.	1	bc	1	30.178	56.8	53.8	81	63.2	4	Cir.	Cum.	
10.	E.S.	1	bc	1	30.195	57.8	53.0	72	63.2	2	Cir cum.	...	
Noon.	E.S.	1	bc	1	30.145	58.3	53.0	70	62.7	1	Cir cum.	...	
2.	S.W.	1	bc	1	30.131	57.8	52.8	71	62.2	1	...	Str.	
4.	S.W.	1	bc	1	30.132	59.3	54.3	71	62.5	2	Cir.	Cm.&Str.	
6.	N.E.E.	1	bc	1	30.143	56.3	52.8	78	...	1	...	Cum.	
8.	N.E.E.	1	b	1	30.143	56.8	51.8	70	62.5	0	...	...	
10.	N.E.E.	1	b	1	30.141	56.8	52.8	75	62.0	0	...	...	
Midt.	N.E.	2	bc	1	30.134	56.8	52.8	75	62.0	1	...	Str.	
Totals.	...	16	bcp	14	1825	88.1	38.2	59	32.7	28	Cir cum.	Cum. & Str.	
Mean.	Variable.	1		1	30.152	57.3	53.2	75	62.3	2			

## SATURDAY, 20TH.

2.	S <sup>b</sup> E.	1	bc	...	30.100	57.3	53.3	75	62.0	2	...	Cm. & Nb.	At noon, lat. 37° 1' s. long. 160° 42' e. Temperature by self-registering thermometer, max. 60°, min. 55° 5. Current, N. 58° e. 2'. Rain showers round horizon. A shoal of porpoises seen. Sp. gr. 1.02651. Large quantities of Pyrosoma observed.
4.	S <sup>b</sup> E.	1	bc	...	30.080	57.8	53.8	76	62.0	7	...	Cm. & Nb.	
6.	Vble.	1	e	...	30.054	55.8	54.3	90	62.0	9	...	Cum.	
8.	E <sup>b</sup> N.	1	bc	...	30.094	56.8	54.3	84	62.0	8	Cir cum.	Cm. & Nb.	
10.	N <sup>b</sup> W.	3	bc	...	30.081	57.8	54.8	81	60.5	8	Cir str.	Cum.	
Noon.	N <sup>b</sup> W.	2	bc	...	30.036	57.8	55.3	84	60.5	6	Cir str.	Cm. & Cumst	
2.	S <sup>b</sup> W.	3	e	...	29.986	58.8	55.3	79	60.0	9	Cir cum.	Cum str.	
4.	S <sup>b</sup> W.	4	e	...	29.994	57.8	54.8	81	60.0	10	...	Cm. & Str.	
6.	S. N. E.	3	bc	1	30.004	58.3	53.8	74	60.0	8	...	Cm. & Str.	
8.	S. N. E.	3	bc	...	30.020	57.8	53.8	76	59.5	6	...	Cum.	
10.	N <sup>b</sup> E <sup>b</sup> N.	4	bc	...	29.996	57.3	53.3	75	59.5	7	...	Cm. & Cumst	
Midt.	N <sup>b</sup> E <sup>b</sup> N.	5	bc	2	29.956	57.5	53.8	77	59.5	5	...	Cm. & Cumst	
Totals.	...	31	bc	3	401	90.8	50.6	952	7.5	85	Cir str. & Cir cum.	Cum., Str., & Nimb.	
Mean.	S <sup>b</sup> E.	3		1	30.033	57.6	54.2	79	60.6	7			

SUNDAY, 21ST JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E. by N.	3	bc	12	29.935	56.8	52.8	75	59.0	3	...	Cum. & Str.	At noon, lat. 37° 58' s. long. 163° 39' E. Temperature by self-registering thermo- meter, max. 60°, min. 55°. Current, s. 23° w. 18'.
4.	N.E. by N.	6	bey	...	29.924	56.8	53.3	78	59.0	5	...	Cum. & Cumst.	
6.	N.E. by N.	5	bc	...	29.921	56.8	52.8	75	59.0	8	...	Cum.	
8.	N.E. by N.	4	c	12	29.908	58.0	51.0	76	59.5	9	...	Cum str.	
10.	N.E. by N.	5	c	...	29.880	58.8	54.8	76	59.5	9	...	Cum str.	
Noon.	N.W. by E.	6	c	...	29.821	59.0	55.8	81	59.5	10	...	Cum str.	
2.	N.E. by N.	6	c	3	29.737	58.8	55.8	82	60.0	10	...	Cum & Str.	
4.	N.E. by N.	7	c	3	29.713	59.8	56.8	82	60.0	9	Cir cum.	Cum str.	
6.	N.E. by N.	6	c	3	29.692	59.8	57.8	88	60.0	10	...	Cum.	
8.	N.W. by E.	7	cp	3	29.664	59.8	57.8	88	60.0	9	...	Cum.	
10.	N.W. by E.	7	cp	4	29.622	59.8	57.8	88	60.0	10	...	Cum.	Sp. gr. 1.02621.
Midt.	N.W. by E.	8	cp	4	29.577	58.3	57.0	91	60.0	10	...	Cum.	
Totals.	...	70	eqp	24	9400	102.5	66.5	20	115.5	102	Cir cum	Cum. & Cum str.	
Mean.	N.E. by N.	6		3	29.783	58.5	55.5	82	59.6	8			

MONDAY, 22d.

2.	N.E. by E.	9	ougt	4	29.540	55.8	54.8	93	...	10	...	Cum. & Nb.	At noon, lat. 38° 39' s. long. 166° 19' E. Temperature by self-registering thermo- meter, max. 60°, min. 54°. Current, s. 39° w. 28'. Severe squalls until 2.15 A.M., when violent lightning and heavy rain commenced, the wind falling. By 4 A.M. the weather began to clear. Sp. gr. 1.02616.
4.	N.W. by W.	4	bcl	...	29.547	56.8	55.8	93	58.5	8	...	Cum. & Cumst.	
6.	N.E. by E.	2	bc	...	29.602	57.8	55.3	84	58.5	1	...	Cum.	
8.	N.W. by W.	3	bey	12	29.606	57.3	55.3	87	58.7	7	Cir.	Cum. & Nb.	
10.	N.W. by W.	3	b	...	29.664	58.5	56.8	89	58.2	0	...	Cum.	
Noon.	N.E. by E.	3	bc	...	29.643	59.5	56.8	84	58.2	1	...	Cum.	
2.	N.W. by W.	3	bc	12	29.594	59.3	56.5	84	58.2	3	Cir str.	Cum.	
4.	N.W. by W.	4	bc	12	29.594	58.8	57.3	91	58.2	2	...	Cum.	
6.	N.W. by W.	6	bc	12	29.617	59.3	57.3	88	58.5	2	...	Str.	
8.	N.E. by E.	4	bc	12	29.647	58.8	57.8	94	59.0	1	...	Cum.	
10.	N.W. by E.	5	bc	12	29.647	58.8	57.3	91	58.5	1	Cir str.	...	Sp. gr. 1.02616.
Midt.	N.E. by E.	5	bc	12	29.647	58.8	57.3	91	...	1	Cir cum.	...	
Totals.	...	51	be	22	7348	99.5	78.3	1069	84.5	37	Cir str.	Cum. & Nimb.	
Mean.	N.	4		2	29.612	58.3	56.5	89	58.4	3			

TUESDAY, 23d.

2.	N.E. by E.	5	b	2	29.649	59.8	57.8	88	58.0	0	...	...	At noon, lat. 38° 52' s. long. 165° 20' E. Temperature by self-registering thermo- meter, max. 62°, min. 55°. Current, s. 56° E. 8'. Sp. gr. 1.02629.
4.	N.E. by E.	5	bc	...	29.663	58.8	57.3	91	58.0	2	...	Cum.	
6.	N.E. by E.	5	bc	...	29.634	58.8	57.8	94	58.2	4	...	Cum.	
8.	N.E. by E.	4	bep	...	29.653	55.5	53.8	89	...	9	...	Cum.	
10.	N.W. by N.	3	bc	2	29.657	57.8	56.3	90	58.7	3	Cir str.	Cum.	
Noon.	N.W. by N.	5	bc	2	29.632	58.8	56.5	91	59.0	5	Cir str.	Str.	
2.	N.W. by W.	5	bcm	...	29.624	59.3	57.3	87	59.0	3	Cir str.	Cum.	
4.	N.W. by W.	6	bc	...	29.617	59.0	56.8	86	58.7	7	...	Cum.	
6.	N.W. by W.	5	bcm	...	29.606	59.3	56.8	85	58.3	4	...	Cum.	
8.	N.W. by N.	5	bc	2	29.620	58.8	56.8	88	58.5	7	Cir str.	Cum.	Lightning to N.E. by E.
10.	N.W. by W.	4	bc	2	29.594	58.8	55.8	82	58.5	2	Str.	Cum.	
Midt.	N.W. by W.	6	bcl	2	29.614	58.8	56.3	85	58.7	7	...	Cum. & Str.	
Totals.	...	58	bcm	12	7537	103.5	79.3	96	93.6	53	Cir str.	Cum.	
Mean.	N.W. by S.	5		2	29.628	58.6	56.6	88	58.5	4			

## WEDNESDAY, 24TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, corrected to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw by w.	6	eq	3	29.578	57.8	56.3	90	58.5	10	...	Cum.	At noon, lat. 39° 32' s. long. 171° 48' E. Temperature by self-registering thermo- meter, max. 60°, min. 55°. Current, s. 65° E. 9'.
4.	sw by w.	4	be cp	3	29.579	56.3	55.8	97	58.5	5	...	Cum.	
6.	w by s.	4	bc	3	29.620	57.3	54.8	84	58.0	5	...	Cum.	
8.	sw by s.	3	bc	3	29.670	57.3	55.8	90	58.0	6	...	Cum.	
10.	sw by s.	4	bc	2	29.696	57.8	55.8	87	58.2	5	...	Cir.	
Noon.	w by N.	3	bc	2	29.699	57.8	55.8	87	58.5	6	...	Cir.	
2.	w by N.	4	bc	...	29.689	56.8	55.3	90	58.2	5	...	Cum.	
4.	w by s.	3	be cp	...	29.706	55.5	54.5	93	...	6	...	Cum.	
6.	N by E.	2	bc	...	29.694	55.8	55.8	100	...	9	...	Cum. & Cum. St.	Sp. gr. 1.02620. Clouds rising slowly from s. w. Westerly swell.
8.	N by E.	1	or	1	29.736	55.8	55.5	98	58.0	10	...	Nimb.	
10.	N by E.	7	or	...	29.738	53.8	53.8	100	57.5	10	...	Cum. & Nb.	
Midd.	E by N.	5	or	...	29.744	52.8	52.5	97	57.5	10	...	Cum. & Nb.	
Totals.	...	46	be cp	17	8143	74.8	61.7	1113	80.9	87	Cir.	Cum. & Nimb.	
Mean.	s. w.	4		2	29.679	56.2	55.1	93	58.1	7			

## THURSDAY, 25TH.

2.	E by S.	6	or	3	29.720	53.3	52.8	97	57.5	10	...	Cum. & Cum. St.	At noon, lat. 40° 29' s. long. 173° 3' E. Temperature by self-registering thermo- meter, max. 55°, min. 49°.
4.	E by S.	3	or	2	29.718	53.8	53.8	100	57.5	10	...	Cum. & Cum. St.	
6.	E by N.	2	ocp	2	29.722	54.3	54.3	97	57.5	9	...	Nimb.	
8.	s by E.	3	or	2	29.798	52.8	52.8	100	58.0	10	...	Nimb.	
10.	s by s.	6	o	...	29.824	54.3	51.0	73	57.0	10	...	Nimb.	
Noon.	s by s.	4	o	...	29.835	53.3	51.0	84	...	10	...	Cum.	
2.	s by E.	3	cp	...	29.821	53.3	51.3	86	55.5	8	...	Cum. & Str.	
4.	s by E.	5	cp	...	29.819	51.8	48.8	80	55.5	9	...	Cum. & Str.	Sp. gr. 1.02597. 5.10 P.M., anchored in Port Hardy. Clouds from S.
6.	s by E.	2	bc	...	29.861	49.3	46.3	79	54.7	8	...	Cum.	
8.	s by E.	4	bc	...	29.929	49.3	46.3	79	...	4	...	Cum.	
10.	s by E.	2	oc	...	29.923	48.8	45.8	79	...	9	...	Cum.	
Midd.	s by E.	7	bc	...	29.920	48.8	44.8	73	...	7	...	Cum.	
Totals.	...	47	be cp	9	9890	23.6	119.0	1032	53.2	104	...	Cum., Str., & Nimb.	
Mean.	s. E.	4		2	29.824	52.0	49.9	86	56.6	9			

## FRIDAY, 26TH.

2.	s by E.	7	bc	...	29.944	47.8	43.8	73	54.0	5	...	Cum.	At Port Hardy. Temperature by self-registering thermo- meter, max. 51°, min. 47°.
4.	s by E.	9	eq	...	29.896	48.3	43.5	68	...	8	...	Cum.	
6.	s by E.	3	eq	...	29.881	47.8	43.8	73	55.7	10	...	Nimb.	
8.	s by E.	8	eq	...	29.898	48.0	45.0	79	53.5	10	...	Cum.	
10.	s by E.	7	eq	...	29.920	48.3	45.5	80	54.5	10	...	Cum.	
Noon.	s by E.	3	eq	...	29.897	48.3	45.5	80	54.5	10	...	Cum.	
2.	s by E.	2	oc	...	29.866	48.8	45.8	79	54.0	10	...	Cum.	
4.	s by E.	7	ocp	...	29.854	48.8	45.8	79	54.0	10	...	Cum.	Sp. gr. 1.02607.
6.	s by E.	3	ocp	...	29.834	46.8	46.3	97	54.0	10	...	Cum.	
8.	s by E.	7	ocp	...	29.828	48.3	46.0	84	54.2	10	...	Cum.	
10.	s by E.	3	or	...	29.813	48.8	47.3	90	54.0	10	...	Cum. & Cum. St.	
Midd.	s by E.	6	or	...	29.800	47.8	46.3	90	54.0	10	...	Cum. & Nimb.	
Totals.	...	65	cp	...	10434	97.8	64.6	972	46.4	113	...	Cum. & Nimb.	
Mean.	s. s. E.	5		...	29.869	48.1	45.4	81	54.2	9			

## SATURDAY, 27TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower	
2.	sby E.E.	3	cyp	...	29.760	48.5	46.8	88	54.0	8	...	Cum.	At noon, lat. 41° 0' S. long. 174° 24' E. Temperature by self-registering thermo- meter, max. 51° 5', min. 46° 5'. 4 A.M., left Port Hardy. Sp. gr. 1.02592.
4.	sby E.E.	7	cyp	...	29.721	48.8	46.8	86	...	10	...	Cum.	
6.	sby E.E.	6	bcpr	...	29.709	49.8	48.5	91	...	9	...	Cm. & Str.	
8.	sby E.E.	7	cyp	...	29.696	...	...	...	...	10	...	Cm. & Str.	
10.	sby E.E.	6	cyp	...	29.756	49.8	47.8	86	54.0	8	...	Cum.	1 P.M., anchored in Ship cove, Queen Charlotte sound.
Noon.	sby E.	7	cyp	...	29.743	48.8	47.8	93	53.5	8	...	Cum.	
2.	ssw by W.	5	cyp	...	29.755	48.0	46.5	90	51.2	10	...	Cum.	
4.	ssw by W.	4	bcq	...	29.770	47.8	45.3	83	51.5	5	...	Cum.	
6.	sby E.	6	bcq	...	29.775	47.8	45.8	86	51.5	9	...	Cum.	
8.	sby W.	2	bcq	...	29.786	48.8	45.8	79	51.5	5	Cir.	Cum.	
10.	sby W.	6	bcq	...	29.811	50.0	46.8	79	...	6	...	Cum.	
Midt.	sby W.	7	bcq	...	29.827	49.8	46.8	80	...	5	...	Cum.	
Totals.	...	66	bcqpr	...	9109	97.9	74.7	941	17.2	93	Cir.	Cum.	
Mean.	s.	6		...	29.759	48.9	46.8	86	52.5	8			

## SUNDAY, 28TH.

2.	sby W.	7	bcq	...	29.839	49.3	46.3	79	51.0	6	...	Cum.	At noon, lat. 41° 16' S. long. 174° 37' E. Temperature by self-registering thermo- meter, max. 50° 5', min. 46° 5'. 8 A.M., left Ship cove.
4.	sby E.	3	bcq	...	29.868	48.8	45.8	79	51.0	8	...	Cum.	
6.	sby E.	7	bcq	...	29.906	48.8	45.8	79	51.0	6	...	Cum.	
8.	ssw by E.	5	bcq	...	29.970	48.8	45.8	79	51.0	7	Cir str.	Cum.	
10.	sby E.	7	bcq	...	29.999	48.8	47.0	87	51.0	7	Cir str.	Cum.	5 P.M., anchored in Port Nicholson.
Noon.	sby E.	7	bcq	...	29.997	48.8	46.8	86	51.2	5	...	Cum.	
2.	sby E.	7	bc	...	29.998	49.8	46.3	77	51.5	4	...	Cm. & Str.	
4.	sby E.	6	bc	...	30.059	50.8	46.3	71	51.2	3	...	Cum.	
6.	sby E.	6	bcq	...	30.106	49.3	45.8	76	51.5	5	...	Cum.	
8.	sby W.	1	bc	...	30.136	49.5	46.0	76	51.5	7	...	Cum.	
10.	sby W.	2	bc	...	30.147	48.8	45.8	79	51.5	5	...	Cum.	
Midt.	Calm.	0	bc	...	30.155	48.8	45.8	79	51.5	3	...	Cum.	
Totals.	...	58	bcq	...	180	110.3	73.5	107	29	66	Cir str.	Cum.	
Mean.	s.	5		...	30.015	49.2	46.1	79	51.2	5			

## MONDAY, 29TH.

2.	sw by S.	1	bc	...	30.163	46.3	44.8	90	...	4	...	Cm. & Str.	At Wellington, New Zealand. Temperature by self-registering thermo- meter, max. 51°, min. 43° 5'.
4.	sw by S.	1	bc	...	30.168	45.3	43.3	85	...	1	...	Cum.	
6.	NE by E.	1	bc	...	30.211	46.3	44.3	86	49.0	3	...	Cum.	
8.	Calm.	0	bc	...	30.257	44.8	43.8	92	...	3	...	Cum.	
10.	Calm.	0	bc	...	30.278	46.5	45.3	92	...	4	...	Cum.	
Noon.	Calm.	0	bc	...	30.248	47.8	46.5	91	...	3	...	Cum.	
2.	Calm.	0	bc	...	30.210	49.8	47.0	81	49.0	8	...	Cum.	
4.	Calm.	0	bc	...	30.205	48.8	46.3	82	49.5	9	...	Cum.	
6.	Calm.	0	bc	...	30.208	48.8	46.8	86	...	7	...	Cum.	
8.	Calm.	0	bc	...	30.212	47.8	45.8	86	49.5	9	...	Cum.	
10.	sby E.	1	bc	...	30.202	47.0	45.8	92	...	7	...	Cum.	
Midt.	sby E.	3	bc	...	30.172	47.8	45.8	86	...	8	...	Cum.	
Totals.	...	7	bc	...	2534	87.0	65.5	1049	10	66	...	Cum.	
Mean.	Variable.	1		...	30.211	47.3	45.5	87	49.3	5			

## TUESDAY, 30TH JUNE 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface, Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.			Upper.	Lower.	
2.	N.N.E.	2	bc	...	30.162	48.3	46.3	86	...	6	...	At Wellington.
4.	N.N.E.	3	bc	...	30.150	48.8	46.8	86	48.5	9	...	Temperature by self-registering thermo-
6.	N.N.E.	4	bc	...	30.145	49.8	46.8	80	...	8	...	meter, max. 54°, min. 45°.
8.	N.N.E.	3	bc	...	30.138	48.8	47.3	90	48.5	7	...	Cum. & Str.
10.	N.N.E.	4	bc	...	30.135	51.8	49.8	86	...	7	...	Cum. & N.b.
Noon.	N.N.E.	3	bc	...	30.104	52.3	50.3	86	...	5	...	Cum.
2.	N.N.E.	3	bc	...	30.087	53.3	51.5	87	...	8	...	Cum.
4.	N.N.E.	2	c	...	30.080	52.8	50.8	86	...	8	...	Cum.
6.	Caln.	0	cr	...	30.063	51.3	50.8	97	50.0	10	...	Cum.
8.	Caln.	0	cr	...	30.055	50.8	50.3	97	...	9	...	Cum.
10.	Caln.	0	cp	...	30.044	49.8	49.3	97	...	8	...	Cum.
Midt.	Caln.	0	cp	...	30.012	50.3	49.3	93	...	9	...	Cum.
Totals.	...	24	bcpr	...	1175	8.1	109.3	111	147.0	94	...	Cum.
Mean.	N. N. E.	2	...	...	30.098	50.7	49.1	89	49.0	8	...	

## WEDNESDAY, 1ST JULY.

2.	Caln.	0	c	...	29.985	49.8	48.3	90	...	9	...	At Wellington.
4.	N.W. ½ E.	1	cp	...	29.964	49.5	47.8	88	...	8	...	Temperature by self-registering thermo-
6.	N.W. ½ E.	2	c	...	29.890	49.8	48.8	93	...	9	...	meter, max. 54°, min. 48.2.
8.	N.W. ½ E.	1	c	...	29.872	50.8	49.8	93	49.0	9	...	Cum. & Str.
10.	N.W. ½ E.	2	cp	...	29.862	51.8	50.3	90	...	8	...	Cum. str.
Noon.	N.W. ½ E.	4	cp	...	29.797	51.8	50.8	93	...	10	...	Cum. str.
2.	N.W. ½ E.	3	cp	...	29.724	51.8	51.3	97	...	10	...	Cum.
4.	N.W. ½ W.	2	cp	...	29.736	52.8	51.8	93	...	10	...	Cum. str.
6.	N.W. ½ W.	4	bcm	...	29.767	52.5	51.5	93	49.0	8	...	Cum. str.
8.	...	...	...	...	...	53.8	52.3	90	...	...	...	...
10.	N.W. ½ W.	1	bcp	...	29.858	52.8	52.8	100	...	5	...	Cum. str.
Midt.	S.W. ½ W.	3	bc	...	29.858	50.8	49.8	93	...	7	...	Cum.
Totals.	...	23	cp	...	9313	18.0	5.3	33	...	93	...	Cum. & Cum. str.
Mean.	N.	2	...	...	29.847	51.5	50.4	93	49.0	8	...	

## THURSDAY, 2d.

2.	S.W. ½ W.	1	bc	...	29.905	49.3	47.3	86	...	7	...	At Wellington.
4.	Caln.	0	cp	...	29.980	49.8	47.8	86	...	10	...	Temperature by self-registering thermo-
6.	S. ½ W.	1	c	...	30.030	49.8	48.5	91	...	8	...	Cum.
8.	S. ½ W.	1	c	...	30.106	49.8	48.5	91	49.5	10	...	Cum.
10.	S. ½ E.	1	c	...	30.184	50.2	48.8	92	...	9	...	Cum. str.
Noon.	S. ½ E.	2	c	...	30.185	51.3	49.3	93	...	10	...	Cum. & Cum. str.
2.	S. ½ W.	1	c	...	30.185	49.8	48.8	93	...	6	...	Cum. & Cum. str.
4.	S. ½ E.	2	c	...	30.199	49.8	48.8	93	...	9	...	Cum.
6.	S. ½ E.	1	cp	...	30.229	49.8	47.8	93	48.0	10	...	Cum. str.
8.	S. ½ E.	3	cp	...	30.262	49.8	47.8	86	...	9	...	Cum. str.
10.	S. ½ E.	1	cr	...	30.321	48.3	46.8	90	...	10	...	Cum.
Midt.	S. ½ E.	4	cr	...	30.333	47.8	46.8	93	...	10	...	Cum.
Totals.	...	18	cp	...	1919	113.5	97.0	108.7	17.5	108	...	Cum. & Cum. str.
Mean.	S.	1	...	...	30.160	49.5	48.1	91	48.7	9	...	

## FRIDAY, 3D JULY 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity.	Sat. at 10.	Temperature of sea surface.	Clouds 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	S.W.	3	cp	...	30.354	46.8	45.8	93	...	9	...	Cum str.	...	At Wellington. Temperature by self-registering thermometer, max. 49°, min. 40°.
4.	S.W.	4	cp	...	30.392	46.8	45.0	87	...	10	...	Str.&Cum str.	...	
6.	S.W.	3	cp	...	30.438	45.8	44.8	93	...	10	...	Cum.	...	
8.	S.W.	4	be	...	30.480	45.8	44.3	90	49.0	7	...	Cum.	...	
10.	S.W.	3	be	...	30.525	46.8	44.8	86	...	8	...	Cum.	...	
Noon.	S.W.	5	be	...	30.520	47.8	45.5	84	...	5	...	Cum.	...	
2.	S.W.	12	be	...	30.497	48.3	45.8	82	...	7	...	Cum.&Cum.st	...	
4.	S.W.	3	be	...	30.519	46.8	44.5	84	...	6	...	Cum.&Cum.st	...	
6.	S.W.	1	be	...	30.519	45.8	43.8	86	46.2	8	...	Cum str.	...	
8.	S.W.	1	be	...	30.520	45.8	42.8	79	...	3	...	Cum.	...	
10.	S.W.	1	be	...	30.543	45.3	43.5	87	...	2	...	Cum.	...	
Midt.	Calm.	0	bem	...	30.541	43.0	41.8	90	...	1	...	Cir str.	...	
Totals.	...	34	bem	...	5848	74.8	52.4	1041	15.2	76	...	Cir str.	Cum. & Cum str.	
Mean.	S.W.	3		...	30.487	46.2	44.4	87	47.6	6	...			

## SATURDAY, 4TH.

2.	S.W.	1	o	...	30.525	41.8	40.8	92	...	9	...	Str.	...	At Wellington. Temperature by self-registering thermometer, max. 47°, min. 39°.
4.	S.W.	1	o	...	30.526	41.8	40.8	92	...	10	...	Str.	...	
6.	Calm.	0	be	...	30.519	40.8	39.8	92	...	3	...	Str.	...	
8.	Calm.	0	o	...	30.517	41.8	40.8	92	48.0	10	...	Str.	...	
10.	Calm.	0	em	...	30.544	43.3	42.3	92	...	10	...	Str.	...	
Noon.	Calm.	0	c	...	30.504	43.5	43.8	87	...	10	...	Str.	...	
2.	Calm.	0	be	...	30.485	45.8	43.8	86	...	7	...	Cum.&Str.	...	
4.	Calm.	0	be	...	30.471	45.8	44.5	91	...	5	...	Cum.&Str.	...	
6.	Calm.	0	be	...	30.473	44.3	42.3	84	49.5	8	...	Cum.&Str.	...	
8.	Calm.	0	be	...	30.472	42.8	40.8	84	...	3	...	Cum.	...	
10.	Calm.	0	bem	...	30.462	41.8	40.8	92	...	7	...	Cum.&Str.	...	
Midt.	Calm.	0	bem	...	30.461	41.3	40.3	92	...	5	...	Cum.&Str.	...	
Totals.	...	...	bem	...	5959	36.8	20.8	1076	17.5	87	...	Cum. & Str.	...	
Mean.	Calm.	0		...	30.496	43.1	41.7	89	48.7	7	...			

## SUNDAY, 5TH.

2.	Calm.	0	bem	...	30.432	40.8	40.3	96	...	5	...	Cum.&Str.	...	At Wellington. Temperature by self-registering thermometer, max. 54°, min. 40°.
4.	Calm.	0	bem	...	30.423	40.8	40.3	96	...	6	...	Cum.&Str.	...	
6.	Calm.	0	em	...	30.385	40.3	39.5	94	...	8	...	Cum.&Str.	...	
8.	Calm.	0	be	...	30.338	40.8	39.8	92	48.0	10	...	Str.	...	
10.	Calm.	0	be	...	30.336	42.3	41.8	96	...	8	...	Cum.&Str.	...	
Noon.	Calm.	0	be	...	30.278	44.8	44.3	97	...	8	...	Cum.	...	
2.	S.W.	1	c	...	30.224	46.8	45.3	90	...	8	...	Cum.	...	
4.	S.W.	1	em	...	30.183	46.3	44.8	90	...	10	...	Cum.	...	
6.	S.W.	1	em	...	30.148	45.8	45.3	97	46.7	10	...	Cum.	...	
8.	S.W.	1	em	...	30.108	46.3	44.8	90	...	10	...	Cum.	...	
10.	S.W.	1	em	...	30.060	48.8	48.5	98	...	10	...	Cum.	...	
Midt.	S.W.	2	er	...	30.015	49.8	48.8	93	...	10	...	Cum.	...	
Totals.	...	7	empr	...	2930	53.6	43.5	49	14.7	103	...	Cum. & Str.	...	
Mean.	S.	1		...	30.214	44.5	43.6	94	47.3	9	...			

MONDAY, 6TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>1</sup> / <sub>2</sub> W.	12	cdm	...	29.977	51.8	50.8	93	...	10	...	Cum.	At Wellington. Temperature by self-registering thermo- meter, max. 57°, min. 52° 5.
4.	N <sup>1</sup> / <sub>2</sub> E.	5	cpdm	...	29.932	51.8	50.8	93	...	10	...	Cum.	
6.	N <sup>1</sup> / <sub>2</sub> E.	2	cm	...	29.889	52.3	51.3	93	...	10	...	Cum.	
8.	N <sup>1</sup> / <sub>2</sub> E.	4	eq	...	29.860	52.3	51.0	91	49.0	10	...	Cum.	
10.	N <sup>1</sup> / <sub>2</sub> E.	4	ocp	...	29.820	53.8	51.8	87	...	10	...	Cm.&Str.	
Noon.	N <sup>1</sup> / <sub>2</sub> E.	7	oqr	...	29.751	53.3	51.8	90	...	10	...	Cm.&Str.	
2.	N <sup>1</sup> / <sub>2</sub> E.	5	oqr	...	29.658	52.3	51.8	97	...	10	...	Cum.	
4.	N <sup>1</sup> / <sub>2</sub> W.	5	oqr	...	29.629	53.3	52.8	97	...	9	...	Cum.	
6.	N <sup>1</sup> / <sub>2</sub> E.	4	beqpd	...	29.647	54.3	53.8	97	...	8	...	Cum.	
8.	N <sup>1</sup> / <sub>2</sub> W.	7	beq	...	29.650	56.0	54.8	89	...	7	...	Cm.&Nb.	
10.	N <sup>1</sup> / <sub>2</sub> W.	6	beqm	...	29.637	55.8	54.8	93	...	10	...	Cum.	
Midt.	NW <sup>1</sup> / <sub>2</sub> W.	7	beqp	...	29.614	55.8	54.3	90	...	6	...	Cum.	
Totals.	...	58	cp	...	9044	42.8	29.8	30	...	110	...	Cum. & Str.	
Mean.	S.	5		...	29.754	53.6	52.5	92	49.0	9	...		

TUESDAY, 7TH.

2.	N <sup>1</sup> / <sub>2</sub> W.	6	beq	...	29.627	55.8	53.8	87	...	6	Cir.	Cum.	At noon, lat. 41° 41' S., long. 175° 26' E. Temperature by self-registering thermo- meter, max. 59°, min. 54°. 7 A.M., left Port Nicholson.
4.	N <sup>1</sup> / <sub>2</sub> W.	2	beq	...	29.639	55.8	53.8	87	...	4	Cir.	Cum.	
6.	NW <sup>1</sup> / <sub>2</sub> W.	6	beq	...	29.656	55.8	53.8	87	...	7	Cir.	Cum.	
8.	NW <sup>1</sup> / <sub>2</sub> W.	4	beq	...	29.674	55.5	53.8	89	...	4	Cir.	Cum.	
10.	NW <sup>1</sup> / <sub>2</sub> W.	5	beq	...	29.670	56.0	53.8	86	52.0	4	...	Cum.	
Noon.	NW <sup>1</sup> / <sub>2</sub> N.	4	beq	...	29.637	57.3	53.8	79	52.0	3	...	Cum.	
2.	NW <sup>1</sup> / <sub>2</sub> N.	6	beq	...	29.662	57.8	54.3	78	52.5	2	...	Cum.	
4.	NW <sup>1</sup> / <sub>2</sub> W.	2	beq	...	29.699	57.3	53.8	78	52.5	4	Cir.	Cum.	
6.	N <sup>1</sup> / <sub>2</sub> W.	5	beq	...	29.697	57.3	53.8	78	53.5	2	Str.	Cum.	
8.	N <sup>1</sup> / <sub>2</sub> W.	4	beq	...	29.704	55.8	53.8	87	53.5	5	Cir.	Cm.&Str.	
10.	NW <sup>1</sup> / <sub>2</sub> N.	7	oqr	...	29.734	55.8	53.3	84	53.5	7	...	Cum.	Sp. gr. 1.02579.  Sea covered with Pyrosoma brilliantly phosphorescent.
Midt.	NW <sup>1</sup> / <sub>2</sub> N.	6	o	...	29.746	56.8	54.5	85	53.5	10	...	Nimb.	
Totals.	...	57	beq	...	8145	77.0	46.3	1005	23.0	58	Cir. & Str.	Cum.	
Mean.	S.S.W.	5		...	29.679	56.4	53.9	84	52.9	5	...		

WEDNESDAY, 8TH.

2.	NW <sup>1</sup> / <sub>2</sub> N.	6	oc	2	29.828	56.3	53.8	84	57.0	10	...	Str.	At noon, lat. 40° 28' S., long. 177° 43' E. Temperature by self-registering thermo- meter, max. 58°, min. 56°. Current, S. 39 E. 19'. Passing large quantities of Pyrosoma brilliantly phosphorescent.  Sp. gr. 1.02626.  Pyrosoma in large numbers.
4.	NW <sup>1</sup> / <sub>2</sub> W.	3	o	...	29.836	56.3	54.3	87	57.0	10	...	Str.	
6.	W <sup>1</sup> / <sub>2</sub> N.	2	cm	...	29.858	56.8	54.8	87	57.5	10	...	Cum.	
8.	W <sup>1</sup> / <sub>2</sub> N.	1	e	...	29.900	55.8	54.8	93	57.0	9	...	Cum str.	
10.	W <sup>1</sup> / <sub>2</sub> S.	3	be	2	29.885	56.3	54.3	87	57.2	7	Cir.	Cum str.	
Noon.	Variable.	1	be	1	29.844	56.8	54.8	87	57.2	8	...	Cum str.	
2.	N <sup>1</sup> / <sub>2</sub> E.	1	be	...	29.822	57.0	54.5	84	57.5	8	...	Cm.&Cm.st	
4.	NNE.	1	be	...	29.795	56.8	54.8	87	57.7	9	...	Cm str.	
6.	NE.	4	e	...	29.786	57.3	54.8	84	57.0	8	...	Cm.&Str.	
8.	NE.	3	beq	...	29.762	56.8	55.8	93	57.2	5	...	Cm.&Str.	
10.	NE.	1	beqd	...	29.690	57.3	57.3	100	57.0	8	...	Cm.&Str.	
Midt.	N <sup>1</sup> / <sub>2</sub> W.	3	be	2	29.665	56.8	56.8	100	57.0	4	Cir.	Cum.	
Totals.	...	29	cp	7	9671	80.3	60.8	1073	23	96	Cir.	Cum., Str., & Cum str.	
Mean.	Variable.	2		2	29.806	56.7	55.1	89	57.2	8	...		

## THURSDAY, 9TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w. $\frac{1}{2}$ w.	4	bc	2	29.658	56.8	56.3	97	58.0	8	...	Cum.	At noon, lat. 38° 56' s. long. 178° 44' E. Temperature by self-registering thermo- meter, max. 57° 5, min. 55° 0. Current, S. 38° E. 8'. 6 A.M., swell from northward. Noon, swell from s.w. Sp. gr. 1.02629. 6 P.M., cross swell.
4.	s.w. $\frac{1}{2}$ w.	4	bc	...	29.642	55.8	52.5	79	58.0	5	Cir.	Cum.	
6.	w.b.s. $\frac{1}{2}$ s.	12	bc	...	29.634	55.8	54.8	93	58.0	9	...	Cum.	
8.	w.b.s. $\frac{1}{2}$ s.	6	bc	...	29.702	55.3	54.0	91	57.7	4	Cir.	Cm. & Str.	
10.	w.b.s. $\frac{1}{2}$ s.	4	bc	...	29.807	55.8	53.3	84	57.2	7	Cir.	Cm. & Str.	
Noon.	s.w. $\frac{1}{2}$ w.	5	bc	...	29.833	56.3	54.3	87	57.2	6	Cir.	Cm. & Str.	
2.	s.w. $\frac{1}{2}$ w.	4	bc	3	29.876	56.8	53.8	81	58.0	3	Cir.	Cum.	
4.	s.w. $\frac{1}{2}$ w.	4	bc	4	29.896	56.8	53.8	81	58.5	2	Cir.	Cum.	
6.	s.w. $\frac{1}{2}$ s.	3	bc	3	29.946	57.0	53.0	75	58.2	1	...	Cum.	
8.	s.e. $\frac{1}{2}$ e.	1	bc	1	29.976	56.8	52.8	75	58.2	1	...	Cm. & Str.	
10.	s.w. $\frac{1}{2}$ w.	2	bc	...	29.983	56.8	53.8	81	57.7	2	Cir.	Cm. & Str.	Midt.
Midt.	s.e. $\frac{1}{2}$ e.	2	bc	...	30.030	57.8	54.3	78	57.7	3	Cir.	Cm. & Str.	
Totals.	...	39	bc	13	9983	77.8	46.7	1002	94.4	51	Cir.	Cm. & Str.	
Mean. Variable.	3			3	29.832	56.5	53.9	83	57.9	4			

## FRIDAY, 10TH.

2.	s.e. $\frac{1}{2}$ e.	1	bc	3	29.990	57.8	54.8	81	57.7	2	Cir.	Str.	At noon, lat. 37° 36' s. long. 179° 24' E. Temperature by self-registering thermo- meter, max. 60°, min. 56°. Current, S. 50° E. 9'. Sp. gr. 1.02638.
4.	s.w. $\frac{1}{2}$ w.	3	bc	3	29.996	56.8	55.3	90	58.5	2	Cir.	Str.	
6.	s.w. $\frac{1}{2}$ w.	4	bc	3	29.999	57.3	55.3	87	58.0	3	Cir.	Cm. & Str.	
8.	s.w. $\frac{1}{2}$ w.	6	bc	3	29.985	57.3	55.8	90	58.2	3	...	Cm. & Str.	
10.	w.b.s. $\frac{1}{2}$ s.	5	bc	12	29.988	57.3	55.3	87	58.2	5	Cir. str.	Cum.	
Noon.	s.w. $\frac{1}{2}$ w.	6	bc	12	29.954	57.8	55.8	87	58.2	3	Cir.	Cm. & Str.	
2.	s.w. $\frac{1}{2}$ w.	4	bc	12	29.950	58.8	56.8	88	59.0	5	...	Cm. & Str.	
4.	s.w. $\frac{1}{2}$ w.	4	bc	12	29.950	58.8	56.8	88	59.0	6	Cir.	Cum.	
6.	s.w. $\frac{1}{2}$ w.	4	bc	12	29.944	58.8	55.8	82	59.7	6	...	Cum.	
8.	s.w. $\frac{1}{2}$ w.	4	c	12	29.982	58.8	55.8	82	59.0	9	...	Cum.	
10.	s.w. $\frac{1}{2}$ w.	3	c	12	29.987	58.3	54.8	79	59.0	10	...	Cum.	Midt.
Midt.	s.w. $\frac{1}{2}$ w.	4	bc	12	29.949	58.0	54.5	79	59.5	8	...	Cum.	
Totals.	...	48	bc	28	11674	95.8	66.8	1020	104.0	62	Cir. & Str.	Cm. & Str.	
Mean. s.w.b.s.	4			2	29.973	58.0	55.6	85	58.7	5			

## SATURDAY, 11TH.

2.	s. $\frac{1}{2}$ w.	4	bc	2	29.930	57.8	55.8	87	59.0	7	Str.	Cum.	At noon, lat. 36° 6' s. long. 178° 21' w. Temperature by self-registering thermo- meter, max. 58° 5, min. 55° 5. Current, s. 55° E. 14'. A few Pyrosoma. Sp. gr. 1.02621.
4.	s. $\frac{1}{2}$ w.	3	bc	12	29.902	56.8	56.3	90	59.2	8	Str.	Cum.	
6.	s.e. $\frac{1}{2}$ e.	2	bc	3	29.909	56.8	56.3	90	57.5	5	Str.	Cum.	
8.	s.e. $\frac{1}{2}$ e.	4	bc	3	29.909	58.3	56.8	90	58.0	8	Str.	Cum.	
10.	s.e. $\frac{1}{2}$ e.	3	c	...	29.902	58.0	57.3	95	58.0	10	Str.	Cum.	
Noon.	s. $\frac{1}{2}$ e.	4	c	...	29.842	58.3	55.8	84	58.0	10	Str.	Cum.	
2.	s.e. $\frac{1}{2}$ e.	3	c	...	29.758	57.8	56.8	93	58.0	10	Str.	Cir. cum.	
4.	s.e. $\frac{1}{2}$ e.	5	or	...	29.728	57.5	56.8	95	58.2	10	Str.	Cir. cum.	
6.	s.e. $\frac{1}{2}$ e.	4	or	...	29.690	57.8	57.3	97	58.2	10	Str.	Cum.	
8.	s.e. $\frac{1}{2}$ e.	4	orq	...	29.633	56.8	56.8	100	58.2	10	...	Cum.	
10.	s.w. $\frac{1}{2}$ w.	2	or	3	29.660	55.5	55.5	100	57.5	10	...	Nimb.	Midt.
Midt.	s.w. $\frac{1}{2}$ w.	4	bc	3	29.652	56.5	55.8	95	57.5	2	...	Cum.	
Totals.	...	41	orq	16	9515	87.9	77.3	1116	97.3	100	Str.	Cum.	
Mean. s.	3			3	29.793	57.3	56.4	93	58.1	8			

## SUNDAY, 12TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to sea-level.	Thermometer.			Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w. s. w.	4	bcq	3	29.639	56.0	53.8	86	58.0	2	...	...	Cum.	At noon, lat. 34° 32' s. long. 178° 12' w. Temperature by self-registering thermometer, max. 61°, min. 56°. Current, s. 55° E. 14'.
4.	w. s. w.	6	bc	3	29.642	55.8	54.3	90	58.0	4	...	...	Cum.	
6.	w. s. w.	5	bc	...	29.662	55.8	54.3	90	59.0	6	...	...	Cum.	
8.	w. s. w.	5	bc	...	29.740	58.8	54.8	76	58.0	3	Cir.	...	Cum.	
10.	w. s. w.	6	bc	5	29.744	58.8	54.8	76	61.5	4	...	...	Cum.	
Noon.	w. s. w.	6	bc	5	29.742	58.8	56.3	85	61.7	3	Cir.	...	Cum.	
2.	w. s. w.	8	bcq	5	29.724	56.8	53.0	76	62.2	4	...	...	Cum.	
4.	w. s. w.	7	bcq	5	29.766	59.8	55.8	76	62.5	2	...	...	Cum.	
6.	w.	6	bc	4	29.792	58.8	55.8	82	60.5	4	...	...	Cum.	
8.	w.	5	bc	...	29.842	59.8	54.8	71	60.5	...	...	...	...	
10.	w.	5	bc	5	29.904	59.8	56.3	79	61.5	4	...	...	Cum.	Sp. gr. 1.02639.
Midd.	w.	4	bc	4	29.956	59.8	56.8	82	63.0	3	...	...	Cum.	
Totals.	...	67	bcq	39	29.553	98.8	60.8	969	6.4	39	...	Cir.	Cum.	
Mean.	w. s. w.	6		4	29.763	58.2	55.1	81	60.5	4				

## MONDAY, 13TH.

2.	w.	6	bcq	4	29.944	58.8	57.3	91	63.0	7	...	Cum. & Nb.	At noon, lat. 31° 22' s. long. 177° 50' w. Temperature by self-registering thermometer, max. 63°, min. 57°. Current, S. 81° E. 26'.  Sp. gr. 1.02660.  6.40 p.m., observed a brilliant blue meteor E. S. W., which fell from an altitude of 30°, visible to the altitude of about 10°.
4.	w. s. w.	4	bcq	4	29.917	58.8	57.3	91	63.0	3	...	Cum. & Nb.	
6.	w.	5	bcq	3	29.927	58.8	57.0	89	63.0	8	...	Cum.	
8.	w. s. w.	4	bc	3	29.969	59.8	57.3	85	63.7	7	Cir. cum.	Cum.	
10.	w. s. w.	4	bc	2	29.977	60.8	57.8	82	63.7	5	Cir.	Cum.	
Noon.	w. s. w.	4	bc	2	29.977	59.8	57.8	88	64.0	7	Cir.	Cum.	
2.	w. s. w.	4	bc	4	29.964	61.8	58.5	80	64.5	7	Cir.	Cum.	
4.	w. s. w.	4	bc	4	29.965	61.8	57.8	77	64.5	4	Cir.	Cum.	
6.	w. s. w.	4	bc	...	29.994	62.3	57.8	75	64.5	4	...	Cum.	
8.	w. s. w.	3	bc	1	30.033	60.8	57.5	80	64.5	1	...	Cum.	
10.	w. s. w.	2	bc	1	30.047	60.8	56.8	77	64.5	2	Cir.	...	
Midd.	w. s. w.	2	bc	1	30.042	60.8	57.8	82	64.7	2	Cir.	...	
Totals.	...	46	bcq	29	29.976	5.1	90.7	997	47.6	57	...	Cir.	Cum. & Nimb.
Mean.	w. s. w.	4		2	29.981	60.4	57.6	83	63.9	5			

## TUESDAY, 14TH.

2.	s. w. w.	2	bc	3	30.026	61.8	57.8	77	64.5	2	Cir.	Cum.	At noon, lat. 29° 15' s. long. 178° 11' w. Temperature by self-registering thermo- meter, max. 66° 5', min. 59° 5'. Current, N. 12° E. 30'.  Sp. gr. 1.02647.
4.	Variable.	1	bc	...	30.003	60.8	56.8	77	64.5	2	Cir.	Cum.	
6.	w. s. w.	0	bc	...	30.024	60.3	56.8	80	64.5	3	...	Cum.	
8.	w. s. w.	1	bc	...	30.064	61.3	57.0	76	65.5	3	...	Cum. & Nimb.	
10.	s. w. w.	1	bc	...	30.065	62.5	57.5	72	65.0	2	...	Cum. & Nimb.	
Noon.	w. s. w.	0	bc	...	30.042	63.8	59.3	75	65.2	1	...	Cum. & Nimb.	
2.	N. N. E.	1	bc	1	30.008	64.8	59.8	73	63.7	1	Cir.	...	
4.	N. N. E.	0	bc	1	30.006	65.8	59.8	68	65.7	1	Cir.	...	
6.	s. w. w.	1	bc	...	29.985	64.3	59.8	75	64.5	2	...	Cum.	
8.	N.	3	bc	...	29.912	63.8	60.8	82	65.0	6	...	Cum.	
10.	N.	3	bc	...	29.994	63.8	60.8	82	65.5	3	...	Cum.	
Midd.	s. w. w.	4	bc	...	29.974	63.8	60.0	78	66.0	8	...	Cum.	
Totals.	...	17	bc	5	30.017	63.1	58.8	76	65.0	34	Cir.	Cir. cum. & Cum.	
Mean.	Variable.	1		2	30.017	63.1	58.8	76	65.0	3			

## WEDNESDAY, 15th JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb.	3	be	...	29.976	63.8	60.8	82	66.0	5	Cir.	Cum.	At noon, lat. 28° 25' s. long. 177° 39' w. Temperature by self-registering thermo- meter, max. 68° 5, min. 64° 0. Current N. 27° E. 8'. A large fin-backed whale seen in the forenoon. Sp. gr. 1.02690. Clouds low.
4.	xwb.	4	be	...	29.951	65.8	61.8	75	66.5	8	Cir.	Cum.	
6.	swbw.	3	bep	...	29.927	64.8	61.8	83	66.2	8	...	Cum.	
8.	xwb.	2	bep	...	29.947	64.8	62.8	83	66.7	6	...	Cum.	
10.	xwb.	4	bep	...	29.937	67.0	64.8	87	67.0	6	...	Cum.	
Noon.	N.N.W.	3	bep	...	29.923	66.5	65.5	94	67.0	7	...	Cum.	
2.	swb.	4	om	...	29.869	65.8	65.8	100	67.3	10	...	Cum.	
4.	xwb.	4	be	...	29.872	63.8	62.8	94	67.8	3	...	Cum.	
6.	swb.	5	be	...	29.883	68.3	66.8	91	68.5	6	...	Cum.	
8.	xwb.	3	be	1	29.884	68.8	66.8	88	68.3	10	...	Cum.	
10.	swb.	5	e	2	29.891	68.8	67.8	94	69.8	9	...	Cum.	
Midn.	xwb.	4	e	2	29.888	69.8	68.5	92	69.8	9	...	Cum.	
Totals.	...	44	bep	5	10948	78.0	56.0	1071	90.9	87	Cir.	Cum.	
Mean.	swb.	4		2	29.912	66.5	64.7	89	67.6	7			

## THURSDAY, 16th.

2.	swbw.	5	be	2	29.871	69.8	68.5	92	70.5	5	Cir cum.	Cum.	At noon, lat. 26° 31' s. long. 174° 39' w. Temperature by self-registering thermo- meter, max. 72°, min. 69°. Current, E. 25'. Sp. gr. 1.02648.
4.	swbw.	5	be	2	29.852	69.5	67.3	87	71.0	8	Cir cum.	Cum.	
6.	swbw.	6	be	...	29.822	69.8	68.8	94	71.0	5	Str.	Cum.	
8.	N.W.	5	be	...	29.862	70.3	68.8	91	71.0	6	Cir.	Cum.	
10.	swbw.	6	be	4	29.880	70.8	69.3	91	71.0	9	Cir.	Cum.	
Noon.	swbw.	6	beq	5	29.836	71.3	69.3	88	71.0	5	Cir.	Cum.	
2.	swbw.	5	beq	...	29.819	71.8	69.8	89	71.0	3	Cir cum.	Cum.	
4.	swbw.	6	beq	...	29.837	71.8	70.3	91	71.0	4	Cir cum.	Cum.	
6.	swbw.	6	be	...	29.831	71.8	69.8	89	71.0	3	Cir str.	...	
8.	swbw.	5	be	...	29.839	71.8	69.8	89	71.7	2	Cir str.	...	
10.	swbw.	5	bel	...	29.866	71.8	70.8	94	71.7	3	...	Cum.	
Midn.	sw.	4	be	...	29.845	71.8	70.8	94	71.7	2	...	Cum.	
Totals.	...	64	beq	13	10160	12.3	113.3	1089	1.6	55	Cir cum. & Cir str.	Cum.	
Mean.	swbw.	5		3	29.847	71.0	69.4	91	71.1	5			

## FRIDAY, 17th.

2.	N.W.	5	be	4	29.835	72.3	70.8	91	71.7	4	...	Cum.	At noon, lat. 25° 5' s. long. 172° 56' w. Temperature by self-registering thermo- meter, max. 73°, min. 68° 2. Current, s. 52° E. 25'. Lightning s.w. to s.e. 6 A.M., wind shifted to w.b.s. in a heavy rain squall. Sp. gr. 1.02650.
4.	N.W.	4	cl	3	29.855	72.3	71.0	93	72.0	9	...	Cu. & Nb.	
6.	N.W.	5	orl	...	29.886	69.5	69.0	97	72.0	10	...	Cu. & Str.	
8.	w.b.s.	3	or	3	29.915	69.8	69.8	100	71.5	10	...	Cu. & Nb.	
10.	w.b.s.	2	cp	2	29.927	70.8	69.8	94	72.0	9	...	Cu. & Str.	
Noon.	w.b.s.	2	be	...	29.911	72.3	70.8	91	72.0	6	...	Cu. & Str.	
2.	w.	2	be	3	29.871	71.3	69.3	88	71.7	8	Str.	Cum.	
4.	w.	2	be	2	29.887	70.8	68.8	88	71.7	9	Str.	Cum.	
6.	N.W.	1	be	1	29.894	71.8	69.3	86	72.5	5	Str.	Cum.	
8.	N.W.	3	be	1	29.906	71.8	69.8	89	73.0	6	Str.	Cum.	
10.	N.W.b.s.	2	cr	1	29.965	71.8	70.8	94	72.5	9	...	Cum.	
Midn.	N.W.b.w.	4	cr	1	29.899	66.8	66.8	100	72.0	10	...	Cum.	
Totals.	...	35	cpl	21	10691	11.3	116.0	1111	24.6	95	Str.	Cum., Str., & Nimb.	
Mean.	w.N.W.	3		2	29.891	70.9	69.7	93	72.0	8			

## SATURDAY, 18TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	w.	4	crlt	2	29.877	67.8	67.8	100	72.0	10	...	Cum.	At noon, lat. 23° 0' S. long. 173° 39' W. Temperature by self-registering thermo- meter, max. 71°, min. 67°. Current, N. 45° E. 8'. 8 A.M., saw a boatswain bird. Sp. gr. 1.02661.
4.	w.s.w.	5	cpr	3	29.872	68.8	68.8	100	72.0	10	...	Cum.	
6.	s.w.	5	cpr	3	29.907	68.3	68.0	98	72.2	10	...	Cm.&N.b.	
8.	s.w.	4	be	3	29.950	68.3	66.8	91	72.2	8	...	Cm.&Cm.st	
10.	w.s.w.	4	be	1	29.961	69.5	67.8	90	71.5	8	...	Cm.&Cm.st	
Noon.	w.s.w.	4	be	2	29.928	69.8	66.3	80	71.5	9	...	Cm.&Cm.st	
2.	w.s.w.	4	cp	1	29.930	69.8	66.8	83	72.0	9	...	Cm.&Str.	
4.	w.s.w.	4	c	1	29.938	69.8	66.8	83	72.2	10	...	Cm.&Str.	
6.	swbw.	4	c	1	29.965	70.8	67.8	83	72.5	10	...	Cm.&Str.	
8.	swbw.	3	be	...	30.011	69.5	66.3	82	72.2	8	...	Cum.	
10.	swbw.	3	o	2	29.999	69.8	67.0	84	73.5	10	...	Cum.	
Midt.	s.s.w.	3	o	2	29.965	70.3	66.8	81	74.5	10	...	Cum.	
Totals.	...	45	...	21	11303	112.5	87.0	95	28.3	112	...	Cum., Str., & Cum str.	
Mean.	swbw.	4	...	2	29.942	69.4	67.2	88	72.4	9	...	Cum str.	

## SUNDAY, 19TH.

2.	s.w.	3	oe	2	29.957	70.8	65.8	73	74.5	10	...	Cum.	At Tongatabu. Temperature by self-registering thermo- meter, max. 73°, min. 68° 2'.  Noon, anchored at Tongatabu.
4.	s.w.	4	oe	2	29.957	71.3	65.8	71	74.2	10	...	Cum.	
6.	s.w.	3	o	2	29.986	69.8	66.0	79	74.2	10	...	Cum.	
8.	sbw.	3	o	2	30.039	70.3	65.3	73	74.2	10	...	Cum.	
10.	sbw.	3	c	...	30.021	...	...	...	74.5	...	...	...	
Noon.	sbw.	2	e	...	30.024	70.8	65.8	73	74.2	10	...	Cum.	
2.	sbw.	3	be	...	29.989	71.8	66.3	71	...	9	...	Cum.	
4.	sbw.	3	...	...	29.990	70.8	65.8	73	...	...	...	...	
6.	sbw.	2	be	...	30.015	69.3	64.8	76	74.5	8	...	Cum.	
8.	Calm.	0	c	...	30.032	68.8	64.8	78	...	10	...	Cum.	
10.	sbw.	1	be	...	30.038	68.0	64.3	80	...	8	...	Cum.	
Midt.	sbw.	1	be	...	30.039	67.5	64.0	81	74.0	7	...	Cum.	
Totals.	...	28	...	8	7078	109.2	58.7	58	23	92	...	Cum.	
Mean.	sbw.	2	c	2	30.006	69.9	65.3	75	74.3	9	...	Cum.	

## MONDAY, 20TH.

2.	sbw.	1	be	...	30.030	67.3	63.8	81	...	9	...	Cum.	At Tongatabu. Temperature by self-registering thermo- meter, max. 74° 2', min. 65° 0'.
4.	sbw.	1	be	...	30.017	66.3	63.0	81	...	3	...	Str.	
6.	sbw.	2	be	...	30.021	66.8	63.8	83	71.0	7	...	Cm.&Str.	
8.	sbw.	1	be	...	30.081	65.8	64.8	78	...	8	...	Cum.	
10.	sbw.	1	be	...	30.077	70.3	64.8	71	...	7	...	Cum.	
Noon.	sbw.	1	be	...	30.048	72.3	65.8	67	...	7	...	Cum.	
2.	sbw.	2	be	...	29.999	73.8	67.0	67	...	7	Cir cum.	Cm.&Str.	
4.	sbw.	1	be	...	29.999	72.3	66.3	69	...	5	Cir.	Cir cum.	
6.	s.e.	1	be	...	30.029	70.3	66.3	78	74.5	6	...	Cir cum.	
8.	Calm.	0	be	...	30.035	69.8	65.8	78	...	7	Cir.	Cum.	
10.	Calm.	0	be	...	30.038	69.3	65.8	81	...	7	...	Cum.	
Midt.	Calm.	0	be	...	30.067	68.8	66.3	85	74.2	7	...	Cum.	
Totals.	...	11	...	...	381	116.1	63.5	919	7	80	...	Cir cum., Cum., & Str.	
Mean.	s.e.	1	be	...	30.032	69.7	65.3	77	74.2	7	...	Cir.	

## TUESDAY, 21st JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to sea- level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	s.e.s.	1	bc	...	30.023	70.0	65.8	77	...	8	...	Cum.	At Tongatabu. Temperature by self-registering thermo- meter, max. 79°, min. 67° 5.
4.	s.e.s.	1	bc	...	30.003	69.8	66.8	83	...	12	...	Cum.	
6.	s.e.s.	1	bc	...	30.020	68.8	66.8	88	...	9	Cir str.	Cir cum.	
8.	s.e.s.	1	bc	...	30.031	71.8	67.8	79	...	3	...	Cum. & Str.	
10.	s.e.s.	1	bc	...	30.009	72.8	70.8	89	...	5	Cir str.	Cum.	
Noon.	s.e.s.	1	bc	...	29.997	76.8	71.8	75	...	4	Cir str.	Cum.	
2.	s.e.s.	1	bc	...	29.973	77.8	72.3	73	...	5	Cir str.	Cum.	
4.	s.e.s.	1	bc	...	29.945	77.3	72.8	77	...	3	Str.	Cum.	
6.	Calm.	0	bc	...	29.958	75.8	73.8	89	75.5	5	...	Cum. & Str.	
8.	Calm.	0	c	...	30.001	74.8	71.8	84	...	10	...	Cum.	
10.	s.e.s.	1	c	...	29.997	73.8	70.8	84	...	10	Str.	Cum.	
Midt.	s.e.s.	1	cr	...	29.989	72.8	70.8	89	74.5	10	...	Cum.	
Totals.	...	10	bc	...	11946	42.3	2.1	987	10.0	74	Cir str.	Cir cum., Cum., & Str.	
Mean. Variable.	...	1		...	29.995	73.5	70.2	82	75.0	6			

## WEDNESDAY, 22d.

2.	s.w.	1	or	...	29.982	70.3	69.3	94	...	10	...	Cum.	At noon, lat. 20° 56' s. long. 175° 12' w. Temperature by self-registering thermo- meter, max. 75° 5, min. 67°. 8 A.M., left Tongatabu.
4.	s.w.	1	c	...	29.959	70.8	68.8	88	...	9	...	Cum.	
6.	s.e.s.	1	c	...	29.963	71.8	68.3	82	74.0	9	...	Cum.	
8.	...	...	c	...	29.977	72.0	68.8	83	...	9	...	Cum.	
10.	s.e.s.	3	a	...	29.987	72.8	69.8	84	75.0	10	...	Cir cum.	
Noon.	s.e.s.	3	a	...	29.935	71.0	69.3	90	75.0	10	...	Cum.	
2.	s.e.s.	2	cr	...	29.933	68.3	67.8	97	75.5	10	...	Cum.	
4.	s.w.	5	cr	...	29.910	67.8	67.8	100	74.5	8	...	Cum.	
6.	s.w.	4	cr	2	29.947	67.8	66.8	94	74.0	10	...	Cum.	
8.	s.	4	cr	3	29.986	67.8	67.0	95	74.5	10	...	Cum.	
10.	s.w.	3	opq	2	29.968	68.0	67.0	94	74.5	10	...	Cum.	
Midt.	s.e.s.	5	opqd	2	29.968	68.0	67.0	94	74.5	10	...	Cum.	
Totals.	...	32	crq	9	11515	116.4	97.7	15	41.0	115	...	Cum.	
Mean.	s.e.	3		2	29.959	69.7	68.1	91	74.5	9			

## THURSDAY, 23d.

2.	s.e.s.	2	cr	...	29.966	67.8	67.8	100	74.5	10	...	Cum.	At noon, lat. 20° 2' s. long. 178° 4' w. Temperature by self-registering thermo- meter, max. 72°, min. 65° 5. Current, N. 18° w. 6. A few flying-fish.
4.	s.e.s.	5	eq	...	29.951	67.3	66.8	97	74.7	9	Cir.	Cum.	
6.	s.	5	c	4	29.987	66.8	65.8	94	74.7	10	...	Cum.	
8.	s.s.e.	4	c	1	30.013	68.0	66.3	90	75.0	10	...	Cum.	
10.	s.e.s.	1	c	...	30.025	68.8	66.3	85	76.2	9	...	Cum.	
Noon.	s.e.s.	4	c	...	29.990	69.8	66.8	83	76.2	10	...	Cum.	
2.	s.e.s.	3	c	3	29.921	70.8	67.3	80	75.5	9	...	Cum.	
4.	s.e.s.	4	c	3	29.915	70.8	67.3	80	75.0	10	...	Cum.	
6.	s.s.e.	3	c	...	29.951	71.8	68.8	84	75.0	10	...	Cum.	
8.	s.	6	crq	1	30.000	67.3	67.3	100	74.5	10	...	Cum.	
10.	...	...	or	3	30.023	66.8	66.8	100	75.2	10	...	Nimb.	
Midt.	...	...	op	3	30.031	66.8	65.5	93	76.0	10	...	Cum.	
Totals.	...	41	eqp	24	11773	102.8	82.8	1086	62.5	117	Cir.	Cum.	
Mean.	s.e.s.	4		3	29.951	68.6	66.9	91	75.2	10			

## FRIDAY, 24TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.	4	op	3	29.984	67.8	66.8	94	75.5	9	...	Cum. & Cm.	At noon, lat. 19° 9' s. long. 179° 42' E. Temperature by self-registering thermo- meter, max. 73° 2', min. 65° 0'.  Upper clouds from nw'bw.  Sp. gr. 1.02650.
4.	s.e.	4	op	3	29.969	67.8	66.8	94	75.5	10	...	Cum.	
6.	s. e.	5	e	...	29.999	67.8	65.8	88	75.5	10	...	Cum.	
8.	s.e.	3	e	...	30.019	68.3	64.8	81	74.7	9	...	Str.	
10.	s.e.	3	be	1	30.023	69.8	65.3	76	76.0	8	...	Str.	
Noon.	s.e.	3	e	1	30.011	71.3	67.8	81	77.0	10	...	Str.	
2.	e. s. e.	3	e	...	29.985	71.8	68.0	89	77.0	10	...	Str.	
4.	e. s. e.	3	e	...	29.962	71.5	68.3	82	77.0	9	...	Str.	
6.	s.e.	3	e	...	29.985	71.5	69.0	85	76.5	10	...	Cum.	
8.	s.e.	2	be	...	30.001	71.8	70.8	94	76.7	9	...	Str.	
10.	s. s. e.	4	be	3	30.039	71.8	70.3	92	75.7	7	...	Cum.	
Midt.	s. s. e.	3	be	3	30.032	71.8	69.8	89	76.0	7	...	Cum.	
Totals.	...	40	cpd	14	.009	3.0	93.5	76	73.1	108	Str.	Cum.	
Mean.	s.e. ½ s.	3		2	30.001	70.2	67.8	86	76.1	9			

## SATURDAY 25TH.

2.	se's.	3	be	2	30.016	72.8	69.8	84	76.0	6	Cir.	Cum.	At Ngaloa harbour. Temperature by self-registering thermo- meter, max. 77°, min. 70° 5'.  11 A.M., anchored in Ngaloa harbour. Sp. gr. 1.02661.		
4.	se's.	3	be	...	30.008	72.5	68.8	81	76.0	4	Cir.	Cum.			
6.	s.e.	3	e	...	30.010	72.8	69.8	84	76.5	9	...	Cum. & Cm.			
8.	se's.	4	be	...	30.015	72.8	69.8	84	76.5	7	...	Cir cum.			
10.	se's.	2	be	...	30.042	74.8	70.8	79	76.5	7	...	Cum. & Str.			
Noon.	s.e.	3	be	...	30.057	75.8	71.8	79	76.2	6	...	Cir cum.			
2.	s.e.	3	be	...	30.032	76.3	71.8	77	...	7	Str.	Cum.			
4.	se's.	3	be	...	30.000	75.8	71.3	77	...	5	...	Cum.			
6.	se's.	4	be	...	30.043	74.8	70.8	79	...	7	...	Cum.			
8.	se's.	3	...	...	...	71.8	70.8	94	...	...	...	...			
10.	se's.	3	be	...	30.049	73.8	70.8	84	...	9	...	Cum.			
Midt.	se's.	2	bcp	...	30.057	72.8	70.8	89	...	8	Str.	Cum.			
Totals.				...	36	be	...	320	46.8	7.1	991	17	75	Cir str.	Cir cum. & Cum.
Mean.		s.e.	3	2	30.030	73.9	70.6	83	76.3	7					

## SUNDAY 26TH.

2.	s.e.	3	bcp	...	30.062	72.8	70.3	87	...	7	...	...	Cum.	At Ngaloa harbour. Temperature by self-registering thermo- meter, max. 76°, min. 69° 5'.  ...
4.	s.e.	2	bcp	...	30.032	72.8	70.8	89	...	8	...	...	Cum.	
6.	s.e.	4	cpd	...	30.052	71.0	70.0	94	...	10	...	...	Cum.	
8.	s.e.	2	bcp	...	30.096	72.3	70.3	89	...	5	...	...	Cum.	
10.	s.e.	3	be	...	30.139	73.8	70.8	84	...	6	...	...	Cum.	
Noon.	s.e.	3	bcp	...	30.099	74.0	71.0	84	...	6	...	...	Cum. & Str.	
2.	s.e.	3	bcp	...	30.091	74.8	70.8	79	...	8	...	...	Cum. & Str.	
4.	s.e.	2	bcp	...	30.064	71.8	69.8	89	...	8	...	...	Cum.	
6.	s.e.	3	be	...	30.057	71.8	68.8	84	...	9	...	...	Cum.	
8.	s.e.	2	be	...	30.086	72.5	68.8	81	...	8	...	...	Cum.	
10.	s.e.	3	be	...	30.106	72.3	68.3	79	...	9	...	...	Cum. & Cm.	
Midt.	s.e.	2	be	...	30.096	72.3	68.3	79	...	8	...	...	Cum. & Str.	
Totals.	...	32	bcp	...	980	32.2	118.0	1018	...	92	...	...	Cum. & Str.	
Mean.	s.e.	3		...	30.082	72.7	69.8	85	...	8	...	...		

## MONDAY, 27TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>by</sup> E.	12	be	...	30.089	71.8	67.8	79	...	8	Str.	Cum.	In Ngaloa harbour. Temperature by self-registering thermo- meter, max. 76°, min. 69°.
4.	SE <sup>by</sup> S.	3	hep	...	30.091	70.8	66.8	78	...	9	...	Cum.	
6.	SE <sup>by</sup> S.	12	be	...	30.108	70.3	64.8	71	...	8	Str.	Cum.	
8.	SE <sup>by</sup> S.	3	be	...	30.130	71.5	65.3	68	...	7	...	Cum.&Str.	
10.	SE <sup>by</sup> E.	12	be	...	30.135	73.5	66.5	66	...	4	...	Cum.	
Noon.	SE <sup>by</sup> E.	3	be	...	30.133	74.0	66.8	65	...	5	...	Cum.	
2.	SE <sup>by</sup> E.	12	be	...	30.045	74.8	68.0	67	...	6	...	Cr.cm&Cm	
4.	SE <sup>by</sup> E.	3	be	...	30.039	74.5	67.3	67	...	7	...	Cum.	
6.	SE <sup>by</sup> E.	12	be	...	30.009	72.8	66.8	70	75.5	6	...	Cum.	
8.	SE <sup>by</sup> E.	3	be	...	30.080	71.8	67.8	79	75.0	5	...	Cum.	
10.	E.S.E.	12	be	...	30.108	71.8	64.8	65	76.2	4	Cir.	Cum.	4 P.M., left Ngaloa harbour for Levuka.
Midt.	E.S.E.	3	be	...	30.097	71.5	64.8	66	76.2	4	Cir.	Cum.	
Totals.	...	30	hep	...	1064	29.1	77.5	841	22.9	73	Cir.&Str.	Cum.	
Mean.	SE <sup>by</sup> E.	2		...	30.089	72.4	66.5	70	75.7	6			

## TUESDAY, 28TH.

2.	SE <sup>by</sup> E.	3	be	...	30.062	71.3	65.3	69	76.2	9	...	Cum.	At noon, lat. 17° 47' S. long. 178° 54' E. Temperature by self-registering thermo- meter, max. 77° 5, min. 71° 0.
4.	E.S.E.	4	be	...	30.034	71.8	65.5	68	76.2	8	...	Cr.cm&Cm	
6.	E <sup>by</sup> S.	2	be	...	30.045	72.8	66.8	70	76.5	8	...	Cum.	
8.	SE <sup>by</sup> E.	4	be	...	30.086	72.8	67.3	72	76.7	7	Cir str.	Cum.	
10.	E.S.E.	4	be	3	30.104	74.8	69.8	74	77.0	4	Str.	Cum.	
Noon.	E.S.E.	4	be	3	30.052	74.3	69.3	74	77.0	7	Str.	Cum.	
2.	S.S.E.	2	be	...	29.979	75.8	70.8	75	...	7	...	Cum.	
4.	SE <sup>by</sup> S.	1	be	...	29.985	75.8	70.3	73	...	8	...	Cum.	
6.	E.S.E.	2	be	...	30.006	73.8	68.8	74	...	7	...	Cum.	
8.	SE <sup>by</sup> E.	1	be	...	29.997	73.8	68.8	74	...	5	...	Cum.	Sp. gr. 1.02669.  2 P.M., anchored in Levuka harbour.
10.	SE <sup>by</sup> E.	2	be	...	30.053	73.8	69.8	79	...	8	...	Cum.	
Midt.	SE <sup>by</sup> E.	1	be	...	30.049	73.3	69.5	80	...	9	...	Cum.	
Totals.	...	30	be	6	452	44.1	102.0	882	39.6	87	Cir str.	Cum.	
Mean.	SE <sup>by</sup> E.	2		3	30.038	73.7	68.5	73	76.6	7			

## WEDNESDAY, 29TH.

2.	SE <sup>by</sup> S.	3	be	...	30.047	72.8	68.8	79	...	8	Str.	Cum.	At Levuka. Temperature by self-registering thermo- meter, max. 82°, min. 71°.
4.	SE <sup>by</sup> S.	2	be	...	30.003	72.8	68.3	77	...	7	...	Cum.	
6.	SE <sup>by</sup> E.	1	be	...	29.989	73.3	67.8	72	...	7	Str.	Cum.	
8.	SE <sup>by</sup> E.	3	be	...	30.061	73.8	70.0	80	...	9	...	Cum.	
10.	SE <sup>by</sup> E.	1	be	...	30.045	75.8	70.8	75	...	5	...	Cum.&Str.	
Noon.	E <sup>by</sup> S.	1	be	...	30.020	79.3	73.8	73	...	6	...	Cum.&Str.	
2.	S.E.	1	be	...	29.970	79.8	74.0	72	...	6	...	Cum.&Str.	
4.	SE <sup>by</sup> S.	1	be	...	29.961	77.8	73.3	77	...	7	...	Cum.&Str.	
6.	SE <sup>by</sup> S.	1	be	...	29.964	75.8	71.8	79	...	6	...	Cum.&Str.	
8.	SE <sup>by</sup> E.	1	be	...	29.997	75.8	71.8	79	...	6	...	Cum.	
10.	SE <sup>by</sup> E.	1	be	...	30.003	75.5	71.8	81	...	6	...	Cum.	
Midt.	E.S.E.	1	be	...	30.017	75.3	71.8	82	...	7	...	Cum.	
Totals.	...	17	be	...	077	67.8	14.0	926	...	80	Str.	Cum. & Str.	
Mean.	SE <sup>by</sup> E.	1		...	30.006	75.6	71.2	77	...	7			

## THURSDAY, 30TH JULY 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, (0 to 10).	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.E.	1	bc	...	29.996	74.8	71.8	84	...	5	...	Cum.	At Levuka. Temperature by self-registering thermo- meter, max. 81°, min. 74°.
4.	E.S.E.	1	bc	...	29.969	74.8	71.8	84	...	5	...	Cum.	
6.	E.S.E.	1	bc	...	29.966	74.8	71.8	84	...	5	...	Cum.	
8.	S.E.	1	bc	...	29.986	75.3	72.3	84	...	4	...	Cum.	
10.	E.S.	1	bc	...	30.021	76.8	68.5	62	...	5	...	Cum.	
Noon.	E.S.	1	bc	...	29.981	78.8	74.8	80	...	5	...	Cum.	
2.	E.S.	1	bc	...	29.942	76.8	74.8	89	...	5	...	Cum.	
4.	E.S.	1	bc	...	29.916	76.3	73.0	83	...	5	...	Cum.	
6.	E.S.	1	bc	...	29.924	75.8	72.8	84	...	6	...	Cum.	
8.	Calm.	0	bc	...	29.943	75.8	72.8	84	...	3	Cir.	Cum.	
10.	East.	1	bc	...	29.971	75.5	72.8	85	...	8	...	Cum.	Upper clouds from west. Rain over the hills.
Milt.	East.	2	bc	...	29.965	75.5	72.8	86	...	6	...	Cm. & Cm.st	
Totals.	...	12	bc	...	11580	71.0	30.0	29	...	63	Cir.	Cum.	
Mean.	E.S.	1	...	...	29.965	75.9	72.5	82	...	5	...	...	

## FRIDAY, 31st.

2.	W.S.	1	bc	...	29.964	75.0	72.8	88	...	6	...	Cm. & Cm.st	At Levuka. Temperature by self-registering thermo- meter, max. 79°, min. 71°.
4.	SW.W.	1	bc	...	29.950	72.8	71.5	92	...	4	...	Cm. & Cm.st	
6.	SW.W.	1	...	...	29.957	72.8	69.8	84	...	...	...	Cum.	
8.	S.E.	1	bc	...	29.989	75.5	73.3	88	...	3	Cir str.	...	
10.	S.E.	1	bc	...	29.991	76.8	73.8	84	...	2	...	Cir cum.	
Noon.	S.E.	1	bc	...	29.971	77.8	74.8	84	...	5	...	Cir cum.	
2.	S.E.	1	bc	...	29.953	79.3	76.3	85	...	4	Cir.	Cum.	
4.	S.E.	2	bc	...	29.925	77.8	74.8	84	...	4	...	Cum.	
6.	S.E.	2	cp	...	29.936	75.5	73.8	91	...	8	...	Cum.	
8.	S.S.E.	2	c	...	29.956	75.5	71.8	81	...	7	...	Cm. & Str.	
10.	S.S.E.	2	bc	...	29.964	74.8	71.8	84	...	9	...	Cum str.	
Milt.	S.S.E.	3	bc	...	29.972	74.8	71.8	84	...	7	...	Cum str.	
Totals.	...	18	bcp	...	11528	68.4	36.3	69	...	59	Cir. & Str.	Cir cum., Cum., & Cum str.	
Mean.	s.	1	...	...	29.961	75.7	73.0	86	...	5	...	...	

## SATURDAY, 1st AUGUST.

2.	S.S.E.	3	bc	...	29.987	74.3	71.3	84	...	8	...	Cum.	At Levuka.
4.	S.S.E.	3	bc	...	29.977	74.3	71.3	84	...	6	...	Cum.	
6.	S.S.E.	1	bc	...	29.973	73.8	71.3	86	...	8	...	Cum.	
8.	SE'S.	1	bc	...	30.019	73.8	71.3	86	...	5	...	Cum.	
10.	S.E.	2	bc	...	30.034	75.3	72.0	83	...	6	...	Cum.	
Noon.	S.E.	1	bc	...	30.024	77.0	72.8	78	...	7	Cir str.	Cum.	
2.	S.S.E.	2	bc	...	30.013	77.8	72.8	75	...	3	Cir.	Cum.	
4.	SE'S.	1	bc	...	30.014	79.3	73.8	73	...	5	Cir.	Cum.	
6.	SE'S.	2	bc	...	29.999	75.8	71.8	79	...	3	...	Cum.	
8.	S.S.E.	2	bc	...	30.039	74.3	70.3	79	77.2	3	...	Cum.	6 P.M., left Levuka for Ngaloa harbour.
10.	SE'S.	2	bc	...	30.037	73.8	69.3	76	77.0	1	...	Cum.	
Milt.	SE'S.	2	bc	...	30.041	73.3	68.8	77	77.0	5	...	Cum.	
Totals.	...	22	bc	...	1157	62.8	16.8	960	2	60	Cir. & Str.	Cum.	
Mean.	S.S.E.	2	...	...	30.013	75.2	71.4	80	77.1	5	...	...	

## SUNDAY, 2d August 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to Sea-Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	SEBS.	2	bc	1	30.012	72.8	67.8	74	77.0	4	...	Cum.	At Noon, lat. 18° 32' s, long. 179° 3' E.
4.	S. E.	1	bc	1	30.002	72.8	68.3	76	77.0	4	...	Cum.	
6.	S. E.	2	bc	1	30.017	72.3	67.8	77	77.0	5	...	Cum.	
8.	S. E.	1	bc	...	30.051	71.8	68.0	80	77.0	3	...	Cm. & Str.	
10.	S. E.	1	bc	...	30.051	74.8	69.3	72	77.2	5	...	Cm. & Str.	
Noon.	S. E.	1	bc	...	30.027	78.0	70.8	66	78.0	2	...	Cm. & Str.	
2.	SEBS.	0	bc	...	29.969	74.8	68.8	70	77.5	2	Cir cum.	Cm. & Str.	
4.	SEBS.	1	bc	...	29.961	74.8	68.8	70	77.5	2	Cir cum.	Cum.	
6.	SEBS.	0	bc	1	29.981	73.8	68.8	74	77.5	1	...	Str.	
8.	SEBS.	1	b	...	30.021	73.8	68.8	79	77.0	0	...	...	
10.	SEBS.	1	b	...	30.009	72.8	68.8	79	...	0	...	...	
Midt.	SEBS.	1	bc	...	29.990	72.8	68.8	79	...	2	...	Cum.	
Totals.	...	12	bc	4	.091	44.3	104.8	56	27	30	Cir cum.	Cum & Str.	
Mean.	SEBS.	1		1	30.008	73.7	68.7	75	77.3	2			

## MONDAY, 3d.

2.	Variable.	1	bc	...	29.992	72.3	68.8	82	76.0	3	...	Cum.	At Ngaloa harbour.
4.	w.	1	b	...	29.967	72.3	68.8	82	76.0	0	...	...	
6.	Calm.	0	b	...	29.991	72.3	68.8	82	76.0	0	...	...	8 A.M., arrived off Ngaloa harbour.
8.	Calm.	0	b	...	29.993	73.3	70.8	87	77.0	0	...	...	
10.	Calm.	0	bc	...	30.003	76.3	72.3	79	77.0	2	...	Cum.	5.30 P.M., anchored in Ngaloa harbour.
Noon.	Calm.	0	bc	...	29.969	78.3	73.3	75	77.0	2	...	Cum.	
2.	Calm.	0	bc	...	29.928	77.3	73.3	79	77.7	2	...	Cum.	
4.	Variable.	1	bc	...	29.921	77.5	73.7	80	77.7	1	...	Cum.	
6.	Calm.	0	bc	...	29.933	75.8	72.8	84	...	2	...	Cum.	
8.	Calm.	0	b	...	29.933	74.8	72.3	87	...	0	...	...	
10.	Calm.	0	b	...	29.956	74.3	71.8	87	...	0	...	...	
Midt.	Calm.	0	b	...	29.959	73.3	71.3	89	...	0	...	...	
Totals.	...	...	bc	...	11545	57.8	18.0	33	54.4	12	...	Cum.	
Mean.	Calm.	0		...	29.962	74.8	71.5	83	76.8	1			

## TUESDAY, 4th.

2.	Calm.	0	b	...	29.958	73.3	71.3	89	...	0	...	...	At Ngaloa harbour.
4.	Calm.	0	bc	...	29.965	72.8	71.3	91	...	3	...	Cum.	
6.	Calm.	0	bc	...	29.959	73.0	71.8	93	...	3	...	Cum.	
8.	Calm.	0	bc	...	29.977	75.8	73.8	89	...	7	Cir.	Cum.	
10.	SEBS.	1	bc	...	30.014	77.8	73.5	78	...	3	...	Cum.	
Noon.	SEBS.	1	bc	...	30.012	79.8	76.3	83	...	5	Cir.	Cum.	
2.	Calm.	0	c	...	29.975	78.8	75.8	85	...	10	...	Cum.	
4.	Calm.	0	c	...	29.963	77.8	74.8	84	...	8	...	Cum.	
6.	SEBS.	1	c	...	29.983	76.8	74.5	88	...	9	...	Cum.	
8.	SEBS.	1	bc	...	30.011	75.3	73.8	91	...	8	...	Cum.	
10.	SEBS.	1	c	...	30.009	75.8	72.8	84	...	9	...	Cum.	
Midt.	SEBS.	1	bc	...	30.011	75.8	72.8	84	...	8	...	Cum.	
Totals.	...	...	bc	...	11837	72.8	42.5	79	...	73	...	Cum.	
Mean.	SEBS.	1		...	29.986	76.1	73.5	87	...	6			

## WEDNESDAY, 5TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>b</sup> s.	1	bcp	...	30·014	75·3	73·3	89	...	7	...	Cum.	At Ngaloa harbour.
4.	SE <sup>b</sup> s.	1	c	...	30·024	74·8	72·8	89	...	9	...	Cum.	
6.	SE.	1	c	...	30·031	74·5	72·5	89	...	9	...	Cum.	
8.	SE.	1	bc	...	30·064	74·8	72·5	88	...	8	...	Cum.	
10.	SE.	1	bc	...	30·094	76·5	73·0	82	...	9	...	Cum.	
Noon.	SE <sup>b</sup> s.	1	bc	...	30·073	77·3	73·0	78	...	8	...	Cum.	
2.	SE <sup>b</sup> s.	2	bc	...	30·031	78·8	74·8	80	...	8	...	Cum.	
4.	SE <sup>b</sup> s.	1	bc	...	30·029	76·8	72·8	79	...	8	...	Cum.	
6.	SE <sup>b</sup> s.	2	c	...	30·024	75·8	72·3	81	...	8	...	Cum.	
8.	SE <sup>b</sup> s.	1	bc	...	30·058	75·8	72·3	81	...	6	...	Cum.	
10.	SE <sup>b</sup> s.	1	bc	...	30·074	75·5	72·0	82	...	7	...	Cum.	
Midt.	SE <sup>b</sup> s.	2	bc	...	30·072	75·3	72·0	83	...	5	...	Cum.	
Totals.	...	15	bcp	...	588	71·2	33·3	41	...	92	...	Cum.	
Mean.	SE $\frac{1}{2}$ E.	1		...	30·049	75·9	72·8	83	...	8			

## THURSDAY, 6TH.

2.	SE <sup>b</sup> s.	1	bc	...	30·074	74·8	71·8	84	...	7	...	Cum.	At Ngaloa harbour.
4.	SE <sup>b</sup> s.	2	bc	...	30·067	74·8	71·8	84	...	8	...	Cum.	
6.	SE <sup>b</sup> s.	2	bc	...	30·073	74·8	72·3	86	...	7	...	Cum.	
8.	E. S. E.	2	bc	...	30·100	75·8	73·0	85	...	7	...	Cum.	
10.	E. S. E.	1	bc	...	30·112	77·8	73·8	79	...	7	...	Cum.	
Noon.	E. S. E.	2	bc	...	30·068	79·3	75·3	80	...	6	...	Cum.	
2.	E <sup>b</sup> s.	1	bcp	...	30·063	76·8	75·3	91	...	8	...	Cum.	
4.	E <sup>b</sup> s.	2	bc	...	30·013	76·8	74·3	86	...	6	...	Cum.	
6.	E <sup>b</sup> s.	1	bc	...	30·011	75·8	73·3	87	...	8	...	Cum.	
8.	E <sup>b</sup> s.	2	c	...	30·023	75·8	73·3	86	...	8	...	Cum.	
10.	E <sup>b</sup> s.	1	bc	...	30·070	76·3	74·0	88	...	6	...	Cum.	
Midt.	E <sup>b</sup> s.	2	bc	...	30·071	75·8	73·3	86	...	5	...	Cum.	
Totals.	...	19	bcp	...	745	74·6	41·5	62	...	83	...	Cum.	
Mean.	E. S. E.	2		...	30·062	76·2	73·5	85	...	7			

## FRIDAY, 7TH.

2.	E <sup>b</sup> s.	2	bc	...	30·051	75·5	72·8	85	...	4	...	Cum.	At Ngaloa harbour.
4.	E <sup>b</sup> s.	1	bc	...	30·021	75·2	72·0	83	...	5	...	Cum.	
6.	Caln.	0	bc	...	30·026	74·8	72·3	86	...	4	Str.	Cum.	
8.	Caln.	0	bc	...	30·063	76·3	74·3	89	...	4	Cir cum.	Cum.	
10.	E <sup>b</sup> s.	1	bc	...	30·039	78·3	75·3	84	...	5	...	Cum.	
Noon.	E <sup>b</sup> s.	1	bc	...	30·016	78·8	75·8	85	...	7	...	Cum.	
2.	E <sup>b</sup> N.	2	bc	...	29·968	80·8	76·8	80	...	6	...	Cum.	
4.	E <sup>b</sup> N.	1	bc	...	29·954	79·8	76·8	85	...	6	Cir cum.	Cum. & Str.	
6.	Caln.	0	bc	...	29·963	78·3	74·8	82	...	5	Cir cum.	Cum.	
8.	Caln.	0	bc	...	29·981	77·8	75·8	89	...	3	...	Cum.	
10.	Caln.	0	bc	...	30·006	77·8	75·8	89	...	2	...	Cum.	
Midt.	Caln.	0	bc	...	30·016	77·3	75·3	89	...	2	...	Cum.	
Totals.	...	8	bc	...	104	90·7	57·8	66	...	53	Cir cum.	Cum.	
Mean.	E.	1		...	30·009	77·6	74·8	85	...	4			

## SATURDAY, 8TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea, 9 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 9 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.993	76.8	75.3	91	...	2	...	Cum.	At Ngaloa harbour.
4.	Calm.	0	bc	...	29.969	76.8	75.3	91	...	5	...	Cum. & Str.	
6.	Calm.	0	bc	...	30.029	76.8	75.3	91	...	6	...	Cum. & Str.	
8.	Calm.	0	bc	...	30.030	76.8	76.3	97	...	3	Str.	Cum.	
10.	Calm.	0	bc	...	30.033	80.0	76.8	84	...	4	Cir.	Cum.	
Noon.	s.b.e.	1	bc	...	30.021	83.8	77.8	72	...	5	Cir.	Cum.	
2.	s.b.s.	1	bc	...	29.965	84.8	79.3	74	...	3	Cir.	Cum.	
4.	s.b.s.	1	bc	...	29.941	82.8	79.8	85	...	4	Cir.	Cum.	
6.	s.b.N.	1	bc	...	29.957	79.8	77.3	87	...	7	...	Cum.	
8.	Calm.	0	bc	...	30.002	79.3	76.8	88	...	6	...	Cum.	
10.	Calm.	0	bc	...	30.013	77.8	76.3	91	...	3	...	Cum.	
Midt.	Calm.	0	bc	...	30.009	77.8	75.8	89	...	2	...	Cum.	
Totals.	...	4	bc	...	11960	113.3	82.1	1040	...	49	Cir.	Cum. & Str.	
Mean.	Calm.	0		...	29.997	79.4	76.8	87	...	4			

## SUNDAY, 9TH.

2.	Calm.	0	bc	...	29.974	77.8	75.8	89	...	3	...	Cum.	At Ngaloa harbour. Temperature by self-registering thermo- meter, max. 83° 5, min. 75° 5.
4.	Calm.	0	bc	...	29.960	77.3	75.3	89	...	2	...	Cum.	
6.	Calm.	0	bc	...	29.955	77.0	75.5	91	...	3	...	Cum.	
8.	S.N.E.	1	bc	...	29.966	81.3	76.8	78	...	7	...	Cum.	
10.	S.E.N.	1	bepd	...	29.993	80.3	76.8	82	...	6	...	Cum.	
Noon.	S.E.N.	2	bc	...	29.951	82.3	76.8	74	...	7	...	Cum.	
2.	S.E.N.	2	bc	...	29.900	81.8	77.8	80	...	5	Cir.	Cum.	
4.	S.E.N.	1	bc	...	29.885	82.8	77.3	74	...	3	Cir.	Cum.	
6.	S.E.	1	bc	...	29.875	79.3	76.3	85	...	1	...	Str.	
8.	S.E.N.	0	b	...	29.903	79.3	76.0	84	...	0	...	...	
10.	S.	1	b	...	29.891	78.8	75.8	85	...	0	...	...	
Midt.	Calm.	0	b	...	29.899	78.3	75.3	84	...	0	...	...	
Totals.	...	8	bepd	...	11152	116.3	75.5	35	...	37	Cir.	Cum.	
Mean.	S.N.E.	1		...	29.929	79.7	76.3	83	...	3			

## MONDAY, 10TH.

2.	Calm.	0	b	...	29.893	77.8	74.8	81	...	0	...	...	At Ngaloa harbour. Temperature by self-registering thermo- meter, max. 83° 7, min. 75° 5.
4.	Calm.	0	bc	...	29.893	77.3	74.8	86	...	3	...	Cum.	
6.	Calm.	0	bc	...	29.890	76.3	74.5	90	...	4	...	Cum.	
8.	Calm.	0	bc	...	29.933	79.8	74.8	75	...	3	...	Cum.	
10.	S <sup>b</sup> w.	1	bc	...	29.945	82.3	72.3	57	...	4	...	Cum.	
Noon.	S <sup>b</sup> w.	1	bc	...	29.875	82.3	72.3	57	...	2	...	Cum.	
2.	S.	1	bem	...	29.843	80.8	72.8	64	79.0	1	...	Cum.	
4.	S. w.	2	bem	...	29.847	80.3	73.3	67	78.7	2	...	Cum.	
6.	S. w.	1	bem	...	29.864	79.8	73.8	71	78.0	2	...	Cum.	
8.	S <sup>w</sup> b. N.	2	bc	...	29.895	79.5	74.3	74	78.0	4	...	Cm. & Str.	
10.	S. w.	2	bmi	...	29.898	78.8	74.8	80	78.7	0	...	...	
Midt.	sw <sup>b</sup> w.	3	c	...	29.926	77.5	74.3	83	78.7	9	...	Cm. & N.b.	
Totals.	...	13	bem	...	10702	112.5	46.8	888	3.1	34	...	Cum.	
Mean.	S. w.	1		...	29.892	79.4	73.9	74	78.3	3			

## TUESDAY, 11TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	sw by s.	3	bc	1	29.900	76.3	72.8	82	78.0	5	...	Cum.	At noon, lat. 19° 16' s. long. 177° 38' E. Temperature by self-registering thermo- meter, max. 82°, min. 73°.
4.	sw by s.	1	cr	1	29.897	74.8	71.8	84	78.0	10	...	Cum.	
6.	s. w.	3	cp	1	29.937	73.8	70.3	81	78.0	10	...	Cum str.	
8.	s. s. w.	12	bc	1	29.969	72.8	69.8	84	77.5	7	...	Cum str.	
10.	s by w.	12	bc	1	29.991	74.8	70.8	79	78.0	5	Cir str.	Cum.	
Noon.	s by w.	1	bc	1	29.965	76.3	70.8	73	78.5	6	Cr. cum. & Str.	Cum.	
2.	s by w.	1	bc	1	29.906	81.3	72.5	61	80.0	5	Cir.	Cum.	
4.	sw by s.	0	bc	1	29.918	78.8	70.8	63	80.0	4	Cir str.	...	
6.	sw by w.	1	bc	1	29.925	76.8	68.8	63	80.0	4	Cr. cum. & Str.	...	
8.	s by w.	0	bc	1	29.936	76.8	69.8	67	80.0	5	...	Cir cum.	
10.	s by e.	1	bc	1	29.983	76.3	70.3	71	78.0	4	...	Cum.	Sp. gr. 1.02667.
Midt.	se by s.	1	bc	1	29.989	75.8	68.8	67	77.5	7	...	Cum.	
Totals.	...	15	bc p	12	11316	74.6	7.3	875	103.5	72	Cir cum. & Str.	Cum. & Cum str.	
Mean.	s. s. w.	1		1	29.943	76.2	70.6	73	78.6	6			

## WEDNESDAY, 12TH.

2.	E by s.	12	bc	1	29.949	75.8	69.8	71	77.5	7	...	Cm. & Nb.	At noon, lat. 19° 7' s. long. 177° 16' E. Temperature by self-registering thermo- meter, max. 76° 5, min. 71° 5. Current, s. 81° w. 9'.
4.	E. S. E.	12	bc	1	29.957	75.8	70.0	72	77.5	5	...	Cum.	
6.	E by N.	12	bc	1	29.949	76.8	70.8	71	78.0	8	...	Cum str.	
8.	E. S. E.	1	c	...	29.984	75.8	71.8	79	77.5	9	...	Cum. str. & Nb.	
10.	se by s.	1	cr	...	29.983	75.8	72.8	84	77.5	10	...	Cum.	
Noon.	se by s.	1	c	...	29.983	73.8	71.3	87	77.5	10	...	Cum.	
2.	S. E.	12	oc p	1	29.941	73.8	70.8	84	77.5	10	...	Cm. & Str.	
4.	SE by E.	12	c	...	29.927	73.8	70.8	84	77.5	10	...	Cm. & Str.	
6.	SE by E.	12	c	...	29.933	74.3	70.8	82	77.5	10	...	Cm. & Str.	
8.	SE by E.	3	c	1	29.941	74.8	71.8	84	77.7	9	...	Cm. & Str.	7 P.M., observed a brilliant meteor to N.E.
10.	SE by E.	3	bc l	...	29.941	75.8	72.3	82	77.5	7	...	Cm. & Str.	
Midt.	E by N.	3	bc l	2	29.935	75.8	72.3	82	77.5	5	...	Cm. & Str.	
Totals.	...	24	bc pl	9	11423	62.1	15.3	2	6.7	100	...	Cum., Str., & Nimb.	
Mean.	E. S. E.	2		1	29.952	75.2	71.3	80	77.6	8			

## THURSDAY, 13TH.

2.	Cal m.	0	oc r	...	29.969	73.3	71.3	89	...	9	...	Str. & Nb.	At noon, lat. 19° 1' s. long. 175° 53' E. Temperature by self-registering thermo- meter, max. 79° 2, min. 72° 0. Current, s. 81° w. 10'. Heavy rain in middle watch with vary- ing wind. 7 A.M., short sharp squall. Sp. gr. 1.02643.
4.	E by s.	1	bc	...	29.892	73.8	71.0	85	78.2	4	...	Cm. & Str.	
6.	N by E.	1	bc	...	29.907	76.8	73.8	84	...	8	...	Cm. & Str.	
8.	sw by s.	6	cq p t	...	29.905	76.8	73.8	84	...	8	...	Cm. & Str.	
10.	N. W.	2	cp	...	29.905	76.8	74.3	86	...	9	...	Cm. & Str.	
Noon.	w. N. w.	3	bc p	...	29.908	76.8	73.8	84	77.8	10	Cir str.	Cum.	
2.	sw by s.	2	bc	...	29.906	78.3	74.8	82	77.8	6	Cir str.	...	
4.	sw by w.	2	...	...	29.902	77.8	74.8	84	77.8	...	...	...	
6.	Variable.	1	bc	...	29.900	77.0	74.8	88	77.5	3	Cir.	Cm. & Str.	
8.	Variable.	0	bc	...	29.939	77.0	74.8	88	77.5	4	Cir.	Cm. & Str.	9.30 P.M., low arch to s by which rose gradually, and brought with it a shift of wind.
10.	w. s. w.	1	bc	...	29.961	74.8	71.8	84	77.5	9	Cir str.	Cum.	
Midt.	sw by s.	3	c	...	29.960	73.8	71.3	86	76.5	10	Cir str.	Cm. & Str.	
Totals.	...	22	bc p t	...	11054	73.0	40.3	64	46	80	...	Cum., Str., & Nimb.	
Mean.	Variable.	2		...	29.921	76.1	73.4	85	77.6	7			

## FRIDAY, 14th August 1874.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb's.	2	bc	...	29.961	72.8	70.8	89	76.5	7	Cir.	Cum.	At noon, lat. 18° 58' s. long. 175° 0' E. Temperature by self-registering thermometer, max. 79° 5, min. 73° 2. Current, s. 45 w. 4'.
4.	sebs.	1	bc	...	29.964	73.8	70.8	84	76.5	6	Cir.	Cum.	
6.	E.	0	bc	...	29.943	73.8	70.3	82	76.5	3	Cir.	Cum.&Str.	
8.	E.	2	bc	...	29.976	75.3	72.3	84	77.5	4	...	Cum.&Cum	
10.	rb's.	1	bc	...	29.994	77.0	73.0	79	77.7	6	Cir str.	Cum.	Sp. gr. 1.02657.
Noon.	rb's.	2	bc	...	29.978	78.8	73.8	75	78.2	3	Cir.	Cum.	
2.	rb's.	2	bc	...	29.952	78.8	74.3	78	78.7	8	Cir.	Cum.	
4.	rb's.	1	bc	...	29.948	77.0	72.8	78	78.7	6	Cir cum.	Cum.	
6.	s.e.	2	bc	...	29.969	77.3	73.8	82	...	8	Cir.	Cum.	
8.	sebe.	1	bc	...	29.982	76.8	73.3	82	77.5	7	...	Cum.	
10.	sebs.	2	bcp	1	29.993	75.3	73.8	91	77.0	8	...	Cum.&Nb.	Midt.
Midt.	sebe.	1	bc	1	30.001	74.8	72.5	88	77.0	5	...	Cum.	
Totals.	...	17	bcp	2	11621	71.5	31.5	992	81.8	71	Cir.	Cum. & Str.	Mean. Variable.
Mean. Variable.	1	1		1	29.968	75.9	72.6	83	77.4	6			

## SATURDAY, 15th.

2.	sebe.	2	bc	1	29.929	74.8	72.8	89	77.0	6	...	Cum.&Cum.st	At noon, lat. 18° 29' s. long. 173° 46' E. Temperature by self-registering thermometer, max. 76° 2, min. 73° 0. Current, w. 22'
4.	sebs.	1	c	1	29.963	75.3	72.8	87	77.0	10	...	Cum.&Cum.st	
6.	sebe.	3	op	1	29.971	75.8	73.3	86	76.5	10	...	Cum.&Nb.	
8.	sebs.	4	cr	2	30.026	73.3	72.3	94	76.5	10	...	Cum.	
10.	sebs.	3	o	...	30.031	75.3	73.0	90	77.2	10	...	Cum.&Nb.	Sp. gr. 1.02644.
Noon.	sebs.	4	bc	...	29.994	75.5	73.3	88	78.0	7	...	Cum.	
2.	sebe.	4	bc	...	29.962	75.5	73.3	88	78.0	8	...	Cum.	
4.	sebe.	3	bc	...	29.957	76.0	73.5	86	78.0	8	...	Cum.	
6.	sebe.	3	bc	...	29.977	75.8	73.3	86	78.0	7	Cir.	Cum.	
8.	sebe.	3	bc	...	29.971	75.8	73.8	89	77.7	4	Cir.	Cum.	
10.	rb's.	3	bc	...	29.997	75.8	73.8	89	78.0	4	...	Cum.&Str.	Midt.
Midt.	sebe.	2	bc	...	30.007	76.3	74.3	89	78.3	6	...	Cum.	
Totals.	...	35	bcp	5	11785	65.2	39.5	101	90.2	90	Cir.	Cum., Cumstr., & Nimb.	Mean. sebe.
Mean. sebe.	3	1		1	29.982	75.4	73.3	88	77.5	7			

## SUNDAY, 16th.

2.	rb's.	2	bel	...	30.011	76.8	73.8	84	78.5	6	...	Cum.	At noon, lat. 18° 3' s. long. 171° 51' E. Temperature by self-registering thermometer, max. 80°, min. 74° 5'. Current, s. 5'. Observed a whale and numerous flying fish.
4.	E.	3	bc	...	29.969	76.8	73.5	83	78.5	9	...	Cum.&Nb.	
6.	sebe.	2	bc	2	30.001	75.3	72.8	87	78.0	8	...	Cum.&Nb.	
8.	sebs.	3	cp	...	30.039	75.8	72.8	84	78.0	10	...	Cum.	
10.	sebs.	3	bc	2	30.034	76.8	73.3	82	78.5	8	Cir.	Cum.	Sp. gr. 1.02626. 7 P.M., a heavy rain squall, during which the wind varied between south and east.
Noon.	sebs.	4	bc	2	30.029	76.8	73.3	82	79.0	7	Cir.	Cum.	
2.	sebe.	3	bc	...	29.973	78.3	73.8	77	80.0	3	Cir.	Cum.	
4.	sebe.	4	bc	...	29.948	77.3	73.0	78	80.0	5	Cir cum.	Cum.	
6.	sebe.	3	bc	...	29.967	77.5	73.8	81	80.0	8	Cir cum.	Cum.	
8.	sw.	4	bcp	2	29.976	74.8	73.3	91	79.4	10	...	Cum.&Str.	
10.	rb's.	3	bc	2	29.977	75.8	72.8	84	79.5	8	Cir.	Cum.	Midt.
Midt.	sebe.	4	bc	2	29.981	75.3	71.8	82	79.5	6	Cir.	Cum.	
Totals.	...	38	bcp	12	11905	77.3	38.0	995	108.9	88	Cir. & Cir cum.	Cum. & Nimb.	Mean. sebe.
Mean. sebe.	3	2		2	29.992	76.4	73.2	83	79.1	7			

## MONDAY, 17TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity. Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>b</sup> E.	4	bc	2	29.992	74.8	72.8	89	79.5	7	...	Cum.	At noon, lat. 17° 23' s. long. 168° 52' E. Temperature by self-registering thermometer, max. 77°, min. 72° 5. Current, s. 76° w. 4. Sp. gr. 1.02648. 6 P.M., several birds in sight and quantities of flying fish.
4.	SE <sup>b</sup> E.	3	cd	2	29.983	74.3	72.8	91	79.0	10	...	Cum.	
6.	E <sup>b</sup> S.	5	o	...	29.993	73.8	71.3	86	79.0	10	...	Cm.&Nb.	
8.	SE <sup>b</sup> E.	5	bc	...	30.021	74.8	71.8	84	78.0	7	...	Cum.	
10.	SE <sup>b</sup> E.	5	bc	...	30.048	75.8	71.8	79	77.2	8	...	Cum.	
Noon.	SE <sup>b</sup> E.	4	or	...	29.978	73.8	72.3	92	77.5	10	...	Str.&Cum.	
2.	E <sup>b</sup> N.	5	c	...	29.964	73.8	70.8	84	77.5	10	...	Cir.	
4.	SE <sup>b</sup> E.	5	c	...	29.960	75.3	72.8	86	77.5	9	...	Cir.	
6.	SE <sup>b</sup> E.	4	c	...	29.952	74.8	72.0	85	...	10	...	Cum.	
8.	...	...	bc	...	30.021	74.5	71.5	84	...	8	...	...	
10.	E <sup>b</sup> S.	6	op	...	29.995	74.8	71.8	84	77.0	10	...	Str.	
Midt.	E <sup>b</sup> S.	5	op	...	29.984	74.8	71.3	82	77.0	10	...	Cum.	
Totals.	...	51	cpr	4	11891	55.3	23.0	1026	79.2	109	...	Cir.	Cum. & Str.
Mean.	SE <sup>b</sup> E.	5	...	2	29.991	74.6	71.9	85	77.9	9	...	...	

## TUESDAY, 18TH.

2.	S <sup>b</sup> E.	5	bc	...	29.978	74.8	71.3	82	77.7	9	...	Cum.	At Api island, New Hebrides. Temperature by self-registering thermometer, max. 77° min. 73° 2. Sp. gr. 1.02637.
4.	E. S. E.	6	bc	...	29.950	75.3	71.3	79	77.2	7	...	Cir.	
6.	SE <sup>b</sup> E.	5	bc	...	29.999	74.8	70.8	79	...	8	...	Cum.	
8.	SE <sup>b</sup> E.	5	bc	...	30.044	75.8	71.0	76	77.0	9	...	Cum.	
10.	SE <sup>b</sup> E.	5	bcp	...	30.048	76.3	71.8	77	...	8	...	Cum.	
Noon.	SE <sup>b</sup> E.	3	bcp	...	30.033	75.3	70.8	77	...	9	...	Cum.	
2.	SE <sup>b</sup> E.	3	cp	...	29.990	74.3	71.8	87	78.7	8	...	Cum.	
4.	SE <sup>b</sup> E.	4	cp	...	29.984	74.8	70.5	77	78.7	9	...	Cum.	
6.	SE <sup>b</sup> S.	5	bc	...	30.014	75.8	70.8	75	78.5	5	...	Cum.	
8.	SE <sup>b</sup> S.	4	bc	...	30.029	75.8	70.8	75	78.5	3	...	Cm.&Str.	
10.	SE <sup>b</sup> E.	5	bc	...	30.057	75.3	70.5	75	78.5	3	...	Cum.	
Midt.	SE <sup>b</sup> E.	4	bc	...	30.055	75.3	69.5	71	78.7	6	...	Cum.	
Totals.	...	54	bcp	4	181	63.6	10.9	930	73.5	84	...	Cir.	Cum.
Mean.	SE <sup>b</sup> E.	4	...	2	30.015	75.3	70.9	77	78.2	7	...	...	

## WEDNESDAY, 19TH.

2.	S. E.	3	bc	2	30.036	74.8	68.8	70	78.5	3	...	Cum.	At noon, lat. 16° 49' s. long. 165° 29' E. Temperature by self-registering thermometer, max. 79° 5, min. 74° 1. Current, s. 64° w. 2. Black bulb in sun 133°. Numerous flying fish. Sp. gr. 1.02636.
4.	S. E.	3	bc	...	30.021	75.8	67.8	63	78.5	2	...	Cum.	
6.	SE <sup>b</sup> S.	3	bc	...	30.042	75.8	68.8	67	78.5	1	...	Cum.	
8.	SE <sup>b</sup> S.	4	bc	2	30.076	76.3	69.3	67	78.5	2	Cir str.	...	
10.	SE <sup>b</sup> S.	3	bc	2	30.083	76.8	70.8	71	79.0	3	Cir cum.	Cum.	
Noon.	SE <sup>b</sup> S.	4	bc	2	30.028	76.8	70.3	69	78.5	4	...	Cum.	
2.	SE <sup>b</sup> S.	4	bc	...	29.993	78.5	71.0	65	79.0	2	...	Cum.	
4.	SE <sup>b</sup> S.	4	bc	...	29.990	77.8	71.3	69	79.0	4	...	Cum.	
6.	SE <sup>b</sup> E.	3	bc	...	30.021	76.8	71.8	75	78.5	6	...	Cum.	
8.	SE <sup>b</sup> E.	4	bc	...	30.057	76.8	69.8	67	78.0	3	Cir.	...	
10.	SE <sup>b</sup> E.	3	bc	...	30.066	75.8	68.8	67	78.5	2	...	Str.	
Midt.	S. E.	4	bc	...	30.058	75.8	69.3	69	78.0	1	...	Cm.&Str.	
Totals.	...	42	bc	10	471	77.8	117.8	819	102.5	33	...	Cir str.	Cum. & Str.
Mean.	S. E.	4	...	2	30.039	76.5	69.8	68	78.5	3	...	...	

## THURSDAY, 20TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S. E.	3	bc	2	30.046	76.0	69.8	70	78.0	2	...	Cum.	At noon, lat. 16° 31' s. long. 163° 4' E. Temperature by self-registering thermometer, max. 80°, min. 75°. Current, s. 44° E. 7'. Black bulb 135°. Sp. gr. 1.02684.
4.	E. S. E.	4	bc	2	30.021	75.8	70.8	75	78.0	4	...	Cum.	
6.	E. S. E.	4	bc	2	30.017	75.8	70.8	75	78.0	5	...	Cum.	
8.	E. S. E.	4	bc	2	30.046	77.3	70.8	69	78.0	4	...	Cum.	
10.	E. S. E.	4	bc	2	30.049	79.3	71.8	65	78.5	5	Cir.	Cum.	
Noon.	E. S. E.	4	bc	2	30.031	77.8	70.8	67	78.7	4	Cir str.	...	
2.	S. E.	4	bc	2	29.968	77.3	71.0	70	78.5	3	...	Cm.&Str.	
4.	E. S. E.	3	bc	1	29.966	76.8	70.8	71	77.5	4	...	Cm.&Str.	
6.	E. S. E.	3	bc	1	29.991	76.8	71.0	72	78.0	5	Cir.	Cum.	
8.	E. S. E.	3	bc	1	30.013	75.8	71.8	79	78.0	6	...	Cum.	
10.	E. S. E.	3	bc	1	30.019	76.3	71.8	77	78.0	5	...	Cum.	
Midt.	E. S. E.	3	bc	1	30.011	75.8	72.3	81	78.0	4	Cir.	Cum.	
Totals.	...	42	bc	19	178	80.8	13.5	871	12	51	Cir.	Cum. & Str.	
Mean.	E. S. E.	3		2	30.015	76.7	71.1	73	78.1	4			

## FRIDAY, 21st.

2.	E.S.E.	4	bc	1	29.974	75.8	71.8	79	77.5	4	...	Cm.&Str.	At noon, lat. 15° 58' s. long. 160° 50' E. Temperature by self-registering thermo- meter, max. 82° 5', min. 75° 2'. Current, s. 84° E. 10'. Black bulb 131'. Sp. gr. 1.02644. Upper clouds from NW <sup>th</sup> . One gannet seen.
4.	E.S.E.	3	bc	1	29.959	75.8	72.3	81	78.0	3	...	Cm.&Str.	
6.	E.S.	2	bc	...	29.997	76.3	72.5	80	78.0	6	...	Cum.	
8.	E.S.	3	bc	...	30.023	77.3	72.0	74	78.0	3	...	Cum.	
10.	E.S.	2	bc	1	30.037	79.0	73.3	72	78.0	2	Cir.	Cum.	
Noon.	E.S.	2	bcm	...	29.995	78.8	72.8	71	79.0	4	...	Cum.	
2.	E.S.E.	3	bc	...	29.955	78.8	73.3	73	79.0	2	Cir.	...	
4.	E.S.	2	bc	...	29.953	78.3	72.8	73	78.5	2	Cir.	...	
6.	S.E.	2	bc	1	29.967	77.3	72.5	76	...	5	Cir str.	Cum.	
8.	S.E.	2	bc	...	29.991	76.8	71.8	75	78.2	4	Cir cum.	Cum.	
10.	S.E.	3	bc	1	29.988	77.3	71.8	73	...	8	Cir cum.	Cum.	
Midt.	S.E.S.	3	bc	2	29.989	76.3	71.8	77	78.2	8	Cir cum.	Cum.	
Totals.	...	31	bcm	7	11828	87.8	28.7	64	82.4	51	Cir., Cir cum., & Str.	Cum. & Str.	
Mean.	E.S.E.	3		1	29.986	77.3	72.4	75	78.2	4			

## SATURDAY, 22d.

2.	S.E.	3	bc	1	29.949	76.3	71.8	77	...	2	Cir.	...	At noon, lat. 15° 16' S. long. 158° 41' E. Temperature by self-registering thermometer, max. 79°, min. 74° 7'. Current, S. 16° E. 17'. Sp. gr. 1.02649. Noon, black bulb 128°. Upper clouds from W. Two gannets seen.
4.	E.S.E.	2	b	1	29.918	75.8	71.3	77	78.5	0	...	...	
6.	S.E.	3	bc	...	29.956	74.8	70.8	79	...	4	...	Cum.	
8.	S.E.S.	3	bc	1	29.988	77.3	71.3	71	79.0	3	...	Cir.&Str.	
10.	S.E.S.	3	bc	...	29.992	77.5	70.8	68	...	2	...	Cum.	
Noon.	S.E.E.	3	bc	...	29.959	77.8	70.8	67	79.0	1	Cir cum.	Cum.	
2.	S.E.E.	3	bc	1	29.901	77.8	71.3	69	...	6	Cir cum.	Cum.	
4.	S.E.E.	3	bc	1	29.967	77.8	70.8	67	78.8	7	Cir cum.	Cum.	
6.	S.E.S.	2	bc	...	29.939	77.3	71.5	72	78.5	4	...	Cum.	
8.	S.E.	3	bc	1	29.981	76.8	70.8	71	79.0	7	...	Cum.	
10.	S.E.	3	bc	1	29.975	76.8	71.0	72	79.0	3	...	Cum.	
Midt.	S.E.	3	bc	1	29.968	76.8	71.5	74	79.0	3	...	Cum.	
Totals.	...	34	bc	8	11433	82.8	13.7	24	70.8	42	Cir cum.	Cum.	
Mean.	S.E.	3		1	29.953	76.9	71.1	72	78.8	3			

SUNDAY, 23<sup>d</sup> August 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper	Lower.	
2.	S.E.½S.	3	bc	2	29.933	76.3	70.5	72	...	3	...	Cum.	At noon, lat. 14° 44' s. long. 155° 53' E. Temperature by self-registering thermo- meter, max. 81° S, min. 75° 0. Current, s. 66', w. 7'. Black bulb 136°. Four boatswain birds, a stormy petrel, and numerous flying fish seen. Sp. gr. 1.02648.
4.	S.½W.	5	bc	2	29.921	76.3	71.3	75	80.0	5	...	Cum.	
6.	S.E.½E.	3	bc	...	29.955	75.8	70.8	75	...	4	...	Cum.	
8.	S.E.½E.	3	bc	2	30.005	78.8	71.8	67	80.0	4	Cir.	Cum.	
10.	S.E.½E.	4	bc	...	29.970	78.3	71.3	67	...	3	...	Cum.	
Noon.	S.½E.	3	bc	1	29.983	77.8	70.3	65	79.0	4	Cir cum.	Cum.	
2.	S.½E.	4	bc	...	29.946	77.3	70.5	68	...	3	...	Cum.	
4.	S.½E.	3	bc	...	29.938	76.8	69.5	66	78.5	2	...	Cum.	
6.	S.E.½E.	4	bc	...	29.958	76.3	67.8	62	78.5	3	...	Cum.	
8.	E.S.½S.	3	bc	...	29.959	75.8	68.8	67	78.5	3	...	Cir cum.	
10.	S.E.½E.	4	bc	...	29.966	75.8	68.8	67	...	7	...	Cum.	
Midt.	S.E.½E.	3	bc	...	29.962	75.8	68.3	65	77.5	4	...	Cum.	
Totals.	...	42	bc	7	11496	81.1	119.7	96	62.0	45	Cir. & Cir cum.	Cum.	
Mean.	S.S.E.	3		2	29.958	76.8	70.0	68	78.8	4			

MONDAY, 24<sup>TH</sup>.

2.	S.E.½E.	4	bc	...	29.933	75.8	68.8	67	78.2	3	...	Cum.	At noon, lat. 14° 5' s. long. 153° 38' E. Temperature by self-registering thermo- meter, max. 81° S, min. 74° 5. Current, s. 44' w. 7'. Black bulb 129°. Sp. gr. 1.02627.
4.	E.S.½S.	4	bc	...	29.905	75.8	68.8	67	78.2	5	...	Cum.	
6.	E.S.½S.	3	bc	...	29.932	75.0	68.3	67	...	2	...	Cum.	
8.	E.S.½S.	3	bc	...	29.953	76.8	71.3	73	79.0	6	...	Cum.	
10.	E.S.½S.	3	bc	...	29.971	77.3	69.8	65	...	3	...	Cum.	
Noon.	E.S.½S.	3	bc	...	29.953	77.8	68.8	59	80.0	2	...	Cum.	
2.	S.E.½E.	2	bc	...	29.893	77.3	69.3	63	...	1	Cir cum.	Cir cum.	
4.	S.E.½E.	3	bc	...	29.882	77.3	69.3	63	79.5	1	...	Cum.	
6.	S.E.½E.	2	bc	...	29.897	76.8	69.3	65	...	1	...	Cum.	
8.	S.E.½E.	2	bc	...	29.909	76.3	68.8	65	78.7	2	...	Cum.	
10.	S.E.½E.	2	bc	...	29.949	76.3	69.8	69	...	5	Cir.	Cum.	
Midt.	E.S.½S.	2	bc	...	29.919	76.8	69.8	67	79.0	4	Cir.	Cum.	
Totals.	...	33	bc	...	11096	79.3	112.1	70	62.6	35	Cir.	Cum.	
Mean.	S.E.½E.	3		...	29.925	76.6	69.3	66	78.9	3			

TUESDAY, 25<sup>TH</sup>.

2.	E.S.½S.	2	bc	1	29.880	76.3	69.3	67	...	3	...	Cum.	At noon, lat. 13° 50' s. long. 151° 55' E. Temperature by self-registering thermo- meter, max. 82° S, min. 75°. Current, s. 74' w. 18'. Black bulb 136°. Some boatswain birds and gannet seen. Sp. gr. 1.02663.
4.	E.½S.	1	bc	...	29.869	75.8	71.3	77	78.5	8	...	Cum.	
6.	E.S.½S.	2	bc	...	29.906	75.8	70.8	75	...	5	...	Cum.	
8.	E.S.½S.	2	bc	...	29.952	75.3	70.3	74	78.5	6	...	Cum.	
10.	E.S.½S.	2	bc	...	29.948	75.0	69.8	62	...	8	...	Cum.	
Noon.	E.½S.	1	bc	...	29.925	75.3	70.8	65	79.0	6	...	Cum.	
2.	E.½S.	1	bc	...	29.879	74.8	72.8	67	...	3	Cir.	...	
4.	E.½S.	2	bc	1	29.854	75.8	71.8	63	80.0	3	Cir & Str.	...	
6.	E.½S.	1	bc	1	29.874	75.0	71.8	68	80.0	2	Cir cum.	...	
8.	S.E.½E.	2	bc	...	29.946	76.8	70.5	70	80.0	3	Cir cum.	Cum.	
10.	S.E.½E.	1	bc	...	29.928	76.3	68.8	65	...	6	...	Cum.	
Midt.	S.½E.	2	bc	...	29.905	76.3	68.3	63	78.5	3	...	Cum.	
Totals.	...	19	bc	3	10866	86.5	5.8	816	64.5	56	Cir cum. & Str.	Cum.	
Mean.	E.S.E.	2		1	29.905	77.2	70.5	68	79.2	5			

## WEDNESDAY, 26TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S <sup>1</sup> / <sub>2</sub> E.	12	bc	1	29.890	75.8	67.8	63	...	6	...	Cm & Str.	At noon, lat. 13° 33' s. long. 150° 53' E. Temperature by self-registering thermo- meter, max. 79°, min. 74°. Current, s. 87° w. 21'. Black bulb 132½°. A boatswain bird, a frigate bird, a stormy petrel, and some tern seen. Sp. gr. 1.02642.
4.	E <sup>1</sup> / <sub>2</sub> S.	12	bc	...	29.876	75.3	66.8	60	78.0	5	Cir str.	...	
6.	E <sup>1</sup> / <sub>2</sub> S.	1	bc	...	29.908	74.8	65.8	58	...	4	Cir cum.	...	
8.	E <sup>1</sup> / <sub>2</sub> N.	12	bc	...	29.953	77.8	67.3	54	80.0	12	Cir str.	...	
10.	E <sup>1</sup> / <sub>2</sub> N.	3	bc	...	29.951	77.8	68.8	59	...	1	Str.	...	
Noon.	SE <sup>1</sup> / <sub>2</sub> E.	12	bc	...	29.937	77.8	69.8	63	79.0	1	Str.	...	
2.	SE <sup>1</sup> / <sub>2</sub> S.	1	bc	...	29.887	75.8	67.8	63	...	1	Cir str.	...	
4.	S <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.861	76.5	68.5	63	78.7	1	Str.	...	
6.	S <sup>1</sup> / <sub>2</sub> W.	2	bc	...	29.897	76.8	69.3	65	...	12	Cir str.	Cum.	
8.	S <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.939	76.0	68.8	66	78.2	3	Cir.	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.943	76.3	69.3	67	78.2	1	...	Cir cum.	
Midt.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.941	75.8	68.8	67	78.0	3	...	Cir cum.	
Totals.	...	27	bc	1	10983	76.5	98.8	748	60.1	30	Cir str. & Str.	Cum. & Cir cum.	
Mean.	SE <sup>1</sup> / <sub>2</sub> E.	2		1	29.915	76.4	68.2	62	78.6	2			

## THURSDAY, 27TH.

2.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	1	29.905	75.3	68.8	68	...	5	...	Cum.	At noon, lat. 13° 9' s. long. 149° 3' E. Temperature by self-registering thermo- meter, max. 80° 5, min. 74° 5. Current, s. 45° w. 4. Black bulb 133°. A few stormy petrel and a booby seen. Sp. gr. 1.02632.
4.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.898	75.3	68.5	67	78.0	6	...	Cum.	
6.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.928	75.8	69.8	71	...	4	...	Cum.	
8.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	1	29.946	77.3	69.8	65	78.0	3	Cir str.	...	
10.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	1	29.968	79.2	71.3	64	...	4	Cir str.	Cum.	
Noon.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.941	77.8	70.3	65	78.5	12	Cir cum.	Cum.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.923	77.5	71.3	70	78.5	4	Cir str.	Cum.	
4.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.895	77.3	71.3	71	78.5	5	Cir str.	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.897	77.8	70.8	67	78.5	4	Cir.	Cum.	
8.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.936	76.8	69.8	67	78.5	5	Cir.	Cum.	Upper clouds from w.
10.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.951	76.8	70.8	71	78.0	4	Cir.	Cum.	
Midt.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.942	76.0	70.5	73	78.0	3	Cir.	Cum.	
Totals.	...	37	bc	3	11130	82.9	3.0	819	25	49	Cir. & Cir str.	Cum.	
Mean.	E. S. E.	3		1	29.927	76.9	70.2	68	78.3	4			

## FRIDAY, 28TH.

2.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	1	29.917	76.3	71.8	77	77.5	5	...	Cum.	At noon, lat. 12° 42' s. long. 146° 46' E. Temperature by self-registering thermo- meter, max. 81° 5, min. 75° 0. Current, w. 2'. Black bulb 127°. Sp. gr. 1.02643. Stormy petrel seen.
4.	E <sup>1</sup> / <sub>2</sub> S.	4	bc	1	29.913	76.3	69.8	69	77.5	2	...	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	2	29.950	75.8	70.8	75	77.0	6	...	Cum.	
8.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	2	29.973	77.0	70.0	67	77.5	2	...	Cir cum.	
10.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	1	30.001	78.8	72.8	71	78.0	2	...	Cir cum.	
Noon.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.964	79.8	73.8	71	78.0	2	...	Cir cum.	
2.	E <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.932	79.8	73.5	70	78.2	4	Cir.	Cum.	
4.	E <sup>1</sup> / <sub>2</sub> S.	2	bc	...	29.920	77.8	71.8	71	...	2	Cir.	Cum. & Str.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.934	77.3	72.8	77	...	3	Cir.	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	2	29.973	76.8	72.0	76	77.5	6	...	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.978	76.8	72.8	79	77.5	5	Cir.	Cum.	
Midt.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.974	76.8	72.3	77	77.5	5	Cir.	Cum.	
Totals.	...	39	bc	9	11429	89.3	24.2	40	76.2	44	Cir.	Cir cum. & Cum.	
Mean.	E. S. E.	3		1	29.952	77.4	72.0	73	77.6	4			

SATURDAY, 29TH AUGUST 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE½E.	4	bc	1	29.929	76.3	71.3	75	77.2	1	Cir.	...	At noon, lat. 12° 8' S. long. 145° 10' E. Temperature by self-registering thermometer, max. 80°·5, min. 75°·0.
4.	SE½S.	3	b	1	29.942	76.3	71.8	77	77.0	0	...	...	
6.	SE½S.	4	bc	...	29.975	76.0	72.8	83	77.2	3	Str.	Cum.	
8.	SE½S.	3	bc	...	29.989	77.0	72.5	77	77.5	1	Str.	Cum.	
10.	SE½S.	4	bc	3	29.999	78.3	73.5	76	77.7	4	Cir.	Cum.	Black bulb 126°. Sp. gr. 1.02643.
Noon.	SE½S.	5	bc	3	29.963	78.8	73.8	75	77.7	5	Cir.	Cum.	
2.	SE½S.	4	bc	2	29.950	78.8	73.3	73	77.7	5	Cir.	Cum.	
4.	SE½S.	4	bc	2	29.966	78.8	73.8	75	77.5	6	Cir.	Cum.	
6.	SE½S.	6	bc	3	29.951	77.0	72.8	78	77.7	7	...	Cum.	
8.	SE½S.	5	c	...	29.981	76.3	71.8	77	...	9	...	Cum.	
10.	SSE½E.	6	bcm	3	29.990	76.0	71.3	76	77.2	8	Cir.	Cum.	
Midl.	SSE½E.	6	bcm	4	29.972	75.8	71.0	76	77.0	6	...	Cum.	
Totals.	...	54	bcm	22	11607	85.4	29.7	78	44	55	Cir. & Str.	Cum.	
Mean.	SE½S.	4		2	29.967	77.1	72.5	76	77.4	5			
SUNDAY, 30TH.													
2.	SE½S.	5	bc	...	29.932	75.8	71.8	79	77.2	8	...	Cum.	At noon, lat. 11° 41' S. long. 144° 9' E. Temperature by self-registering thermometer, max. 80°·5, min. 75°·0.
4.	SE½S.	6	bc	...	29.921	75.8	71.8	79	77.2	7	Cir str.	Cum.	
6.	SE½S.	5	bc	3	29.935	75.8	71.8	79	77.2	4	...	Cum.	
8.	SE½S.	5	bc	...	29.978	77.8	72.0	73	77.5	4	Cir.	Cum.	
10.	SE½S.	5	bc	...	29.991	79.0	73.5	73	...	5	Cir.	Cum.	A few gannets and boatswain birds. Sp. gr. 1.02643.
Noon.	SE½S.	5	bc	...	29.971	78.0	72.8	74	...	7	Cir.	Cum.	
2.	SE½S.	6	ocp	...	...	...	...	...	...	10	...	Cm.&Cmst	
4.	SE½S.	6	oc	...	29.961	77.8	71.8	...	...	10	...	Cm.&Cmst	
6.	SE½S.	5	c	...	29.980	76.5	71.0	73	...	9	...	Cum.	At noon, sighted Raine island. 3.20 P.M., anchored under the lee of the Great Detached reef.
8.	SE½S.	6	bc	...	30.000	76.3	71.3	75	...	8	...	Cm.&Str.	
10.	SE½S.	5	cq	...	30.010	76.3	70.8	73	...	9	...	Cum.	
Midl.	SE½S.	6	cq	...	30.003	75.3	71.0	78	...	8	...	Cum.	
Totals.	...	65	bcp	3	10682	74.4	19.6	57	11	89	Cir str.	Cum. & Cum str.	
Mean.	SE½S.	5		3	29.971	76.8	71.8	75	77.3	7			
MONDAY, 31st.													
2.	SE½S.	6	oc	...	29.958	75.8	70.8	75	...	10	Str.	Cum.	Off Raine island. Temperature by self-registering thermometer, max. 80°, min. 75°·5. 5.40 A.M., left Great Detached reef and proceeded to dredge off Raine island. Sp. gr. 1.02648.
4.	SE½E.	6	oc	...	29.949	75.8	71.8	79	...	10	Str.	Cum.	
6.	SE½S.	6	c	...	29.977	76.8	71.8	75	...	10	...	Cum.	
8.	SE½S.	5	c	...	29.989	76.8	71.8	75	77.0	10	...	Cum.	
10.	SE½S.	6	oc	...	29.951	77.3	72.8	77	77.0	10	...	Cum.	1.30 P.M., left Raine island for Cape York. 5 P.M., anchored for the night between Sir Charles Hardy islands and Ashmore banks.
Noon.	SE½S.	5	c	2	29.945	77.8	73.3	77	77.5	9	...	Cm.&Str.	
2.	SE½S.	6	c	...	29.939	77.6	73.8	80	...	10	...	Cum.	
4.	SE½S.	6	c	...	29.935	77.0	72.8	78	...	9	...	Cum.	
6.	SE½S.	6	cum	...	29.965	76.8	72.8	79	...	10	...	Cm.&Cmst	
8.	SE½S.	5	c	...	30.006	76.8	71.8	75	...	10	Str.	Cum.	
10.	SE½S.	5	cq	2	30.018	76.8	71.8	75	...	10	Str.	Cum.	
Midl.	SE½S.	7	cq	3	30.005	76.3	71.3	75	...	10	Str.	Cum.	
Totals.	...	69	cqum	7	11637	81.6	26.6	80	5	118	Str.	Cum.	
Mean.	SE½S.	6		2	29.969	76.8	72.2	77	77.2	10			

## TUESDAY, 1ST SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE½S.	5	eq	...	29.977	76.5	72.3	78	76.5	10	...	Cum.	At noon, lat. 11° 39' s. long. 143° 2' E. Temperature by self-registering thermometer, max. 80°, min. 75°. 6 A.M., weighed and proceeded for Cape York. Sp. gr. 1.02665. 6.30 P.M., anchored at Port Albany, Cape York, Australia.
4.	SE½S.	7	bcq	...	29.959	76.0	71.8	78	...	8	...	Cum.	
6.	SE½S.	5	bc	...	...	...	...	...	...	9	...	Cum.	
8.	SE½S.	6	...	...	29.999	75.8	72.8	84	...	...	...	Cum & Str.	
10.	SE½S.	3	bc	...	30.021	77.8	73.8	79	77.0	9	...	Cum.	
Noon.	SE½S.	7	c	...	29.995	76.8	72.3	77	77.0	10	...	Cum.	
2.	SE½S.	4	bc	...	29.941	76.8	72.8	79	76.5	6	...	Cum.	
4.	SE½S.	5	bc	...	29.923	76.8	73.0	80	76.5	8	...	Cum.	
6.	SE½S.	5	bc	...	29.927	77.3	73.8	82	...	9	...	Cum.	
8.	SE½S.	6	bc	...	29.965	77.5	73.8	81	...	8	...	Cum.	
10.	SE½S.	5	bc	...	29.971	76.8	72.8	79	...	9	...	Cum.	
Midt.	SE½S.	5	bc	...	29.966	76.8	72.8	79	...	7	...	Cum.	
Totals.	...	63	bc	...	10644	74.9	32.0	106	35	93	...	Cum.	
Mean.	SE½S.	5		...	29.968	76.8	72.9	79	76.7	8	...	Cum.	

## WEDNESDAY, 2d.

2.	SE½S.	3	eqp	...	29.944	74.8	72.8	89	...	9	...	Cum.	At Port Albany, Cape York. Temperature by self-registering thermometer, max. 80° 5', min. 74° 0'.
4.	SE½S.	5	bcq	...	29.924	75.8	72.3	81	...	5	...	Cum.	
6.	SE½S.	3	bcq	...	29.956	76.3	73.8	87	...	8	...	Cum.	
8.	SE½S.	5	bcq	...	29.981	77.3	72.8	77	...	8	...	Cum.	
10.	SE½S.	4	bcq	...	29.981	77.0	74.0	84	...	9	...	Cum str.	
Noon.	SE½E.	6	bcq	...	29.980	79.3	75.3	80	...	9	...	Cum & Cum str.	
2.	SE½S.	4	bc	...	29.963	79.3	74.8	78	...	8	...	Cum.	
4.	SE½S.	6	c	...	29.887	78.8	74.3	78	...	10	...	Cum.	
6.	SE½S.	4	c	...	29.899	77.8	74.8	84	...	10	...	Cum.	
8.	SE½S.	4	c	...	29.920	77.5	73.8	81	...	10	...	Cum.	
10.	SE½E.	5	oc	...	29.912	77.3	73.8	82	...	10	...	Str. & Cum.	
Midt.	SE½E.	6	o	...	29.894	76.8	73.8	84	...	10	...	Str.	
Totals.	...	55	eqp	...	11191	88.0	46.3	25	...	106	...	Cum., Str., & Cum str.	
Mean.	S.E.	5		...	29.933	77.3	73.9	82	...	9	...	Cum., Str., & Cum str.	

## THURSDAY, 3d.

2.	SE½S.	5	o	...	29.960	76.3	72.8	82	...	10	...	Cum.	At Port Albany, Cape York. Temperature by self-registering thermometer, max. 78°, min. 74°.
4.	SE½S.	5	op	...	29.894	75.3	74.8	97	...	10	...	Cum.	
6.	SE½S.	3	op	...	29.910	75.0	73.0	89	...	10	...	Cum.	
8.	SE½S.	4	bcq	...	29.994	75.8	73.5	88	...	9	...	Cum.	
10.	SE½S.	3	bc	...	29.957	76.8	74.3	86	...	8	...	Cum.	
Noon.	SE½S.	5	bc	...	29.939	76.8	73.8	84	...	9	...	Cum.	
2.	SE½E.	3	op	...	29.870	77.5	74.3	83	...	10	...	Str. & Cum.	
4.	SE½E.	5	c	...	29.869	77.5	73.8	81	...	8	...	Str. & Cum.	
6.	SE½S.	3	c	...	29.880	75.8	73.3	86	...	9	...	Cum.	
8.	SE½S.	4	op	...	29.937	75.8	73.8	89	...	10	...	Str. & Cum.	
10.	SE½S.	3	op	...	29.937	75.0	73.8	93	...	10	...	Cum.	
Midt.	SE½S.	5	cpq	...	29.913	74.8	73.8	94	...	9	...	Cum.	
Totals.	...	45	cpq	...	11000	72.4	45.0	1052	...	112	...	Cir.	Str. & Cum.
Mean.	SE½S.	4		...	29.917	76.0	73.7	88	...	9	...	Cir.	

## FRIDAY, 4TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE½S.	6	ocpq	...	29.868	74.8	73.8	94	...	10	...	Cum str.	At Port Albany, Cape York.
4.	SE½S.	4	oc	...	29.864	75.5	73.8	90	...	10	...	Cum.	
6.	SE½S.	4	c	...	29.866	76.3	74.8	91	...	9	...	Cum str.	
8.	SE½S.	3	bc	...	29.907	76.8	74.8	89	...	7	...	Cum.&Str.	
10.	SE½S.	4	bc	...	29.908	78.8	76.8	90	...	5	...	Cum.	
Noon.	SE½S.	3	bc	...	29.908	78.3	75.8	86	...	7	...	Cum.	
2.	SE½S.	5	bc	...	29.849	77.8	75.8	89	...	9	...	Cum.	
4.	SE½S.	4	bc	...	29.835	79.3	76.3	85	...	7	...	Cum.	
6.	SE½S.	3	oc	...	29.853	77.8	75.8	89	77.0	10	...	Cum str.	
8.	SE½S.	3	cp	...	29.896	77.8	75.8	89	...	10	...	Cum.	
10.	SE½E.	3	bc	...	29.930	77.3	75.3	89	...	9	...	Cum.	
Midt.	SE½S.	3	bc	...	29.921	76.8	75.8	94	...	3	...	Cum.	
Totals.	...	45	bcqp	...	10605	87.3	64.6	1075	...	96	...	Cum. & Cum str.	
Mean.	SE½S.	4		...	29.884	77.3	75.4	89	77.0	8	...	...	Cum. & Cum str.

## SATURDAY, 5TH.

2.	SE $\frac{1}{2}$ S.	3	bc	...	29.883	76.8	75.5	93	...	3	...	...	Cum.		At Port Albany, Cape York.
4.	SE $\frac{1}{2}$ S.	3	bc	...	29.855	76.8	75.3	91	...	6	...	...	Cum.		
6.	SE $\frac{1}{2}$ S.	3	c	...	29.892	77.5	75.8	90	77.0	10	...	...	Cm.&Str.		
8.	SE $\frac{1}{2}$ S.	3	bc	...	29.912	77.5	75.8	90	...	8	...	...	Cum.		
10.	SE $\frac{1}{2}$ S.	3	bc	...	29.913	78.8	76.3	88	...	8	...	...	Cum.		
Noon.	SE $\frac{1}{2}$ S.	4	bc	...	29.906	78.3	75.8	86	...	6	...	...	Cir.		
2.	SE $\frac{1}{2}$ S.	4	bc	...	29.876	78.0	75.8	88	...	4	...	...	Cum.		
4.	SE $\frac{1}{2}$ E.	3	bc	...	29.881	78.3	75.8	87	...	7	...	...	Cum.		
6.	SE $\frac{1}{2}$ S.	3	bc	...	...	78.3	75.8	86	...	9	...	...	Cum.		
8.	SE $\frac{1}{2}$ S.	2	c	...	29.912	77.8	75.8	89	...	10	...	...	Cm.&Str.		
10.	SE $\frac{1}{2}$ S.	4	c	...	29.920	77.3	75.3	89	...	9	...	...	Cm.&Str.		
Midt.	SE $\frac{1}{2}$ S.	3	c	...	29.932	76.8	75.0	90	...	10	...	...	Cm.&Str.		
Totals.	...	38	bc	...	9882	92.2	68.0	107	...	90	...	...	Cir.	Cum. & Str.	
Mean.	SE $\frac{1}{2}$ S.	3		...	29.898	77.7	75.7	89	77.0	7	...	...	Cir.	Cum. & Str.	

## SUNDAY, 6TH.

2.	SE $\frac{1}{2}$ S.	5	cpq	...	29.907	79.0	75.8	84	...	10	...	...	Cm.&Str.		At Port Albany, Cape York. Temperature by self-registering thermometer, max. 81°, min. 75°5.
4.	SE $\frac{1}{2}$ E.	3	bcqp	...	29.885	76.8	75.8	94	...	4	...	...	Cum.		
6.	SE $\frac{1}{2}$ S.	4	c	...	29.942	77.8	75.8	89	...	8	...	...	Cum.		
8.	SE $\frac{1}{2}$ E.	3	bc	...	29.991	77.8	76.3	91	...	6	...	...	Cum.		
10.	SE $\frac{1}{2}$ E.	3	bc	...	30.006	78.8	75.8	85	...	8	...	...	Cum.		
Noon.	SE $\frac{1}{2}$ E.	3	bc	...	29.933	80.5	76.8	82	...	7	...	...	Cum.		
2.	SE $\frac{1}{2}$ S.	3	bc	...	29.896	77.8	74.8	84	...	5	...	...	Cum.		
4.	SE $\frac{1}{2}$ S.	4	bc	...	29.887	76.8	74.8	89	...	3	...	...	Cm.&Str.		
6.	SE $\frac{1}{2}$ S.	3	c	...	29.889	77.8	74.8	84	77.5	10	...	...	Cm.&Str.		
8.	SE $\frac{1}{2}$ S.	4	bc	...	29.928	77.8	74.8	84	...	4	...	...	Cum.		
10.	SE $\frac{1}{2}$ S.	3	bc	...	29.945	77.0	74.8	89	...	5	...	...	Cum.		
Midt.	SE $\frac{1}{2}$ S.	4	bc	...	29.926	76.8	73.8	84	...	4	...	...	Cum.		
Totals.	...	42	bcqp	...	11135	94.7	64.1	79	...	74	...	...	Cir.	Cum. & Str.	
Mean.	S. E.	3		...	29.928	77.9	75.3	87	77.5	6	...	...	Cir.	Cum. & Str.	

## MONDAY, 7TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE $\frac{1}{2}$ S.	3	bc	...	29.918	76.8	73.8	84	...	7	...	Cum.	At Port Albany, Cape York. Temperature by self-registering thermo- meter, max. 81°, min. 75°5.
4.	SE $\frac{1}{2}$ S.	4	bc	...	29.906	76.8	73.8	84	...	4	...	Cum.	
6.	SE $\frac{1}{2}$ S.	3	bc	...	...	76.3	73.8	87	77.0	3	...	Cum.	
8.	SE $\frac{1}{2}$ S.	4	bc	...	29.971	77.8	73.8	79	...	4	...	Cum.	
10.	SE $\frac{1}{2}$ S.	3	bc	...	29.975	79.8	75.5	78	...	6	...	Cum.	
Noon.	SE $\frac{1}{2}$ S.	3	bc	...	29.941	80.5	76.0	78	...	5	...	Cum.	
2.	SE $\frac{1}{2}$ S.	3	bc	...	29.896	78.5	74.3	78	...	6	...	Cum.	
4.	SE $\frac{1}{2}$ S.	4	bc	...	29.867	78.5	74.3	78	...	6	...	Cum.	
6.	SE $\frac{1}{2}$ S.	3	bc	...	29.870	77.8	73.8	79	77.2	8	...	Cum.	
8.	SE $\frac{1}{2}$ S.	3	bc	...	29.898	78.0	73.8	78	...	6	...	Cum.	
10.	SE $\frac{1}{2}$ S.	3	bc	...	29.915	78.0	73.3	76	...	4	...	Cum.	
Midd.	SE $\frac{1}{2}$ S.	3	c	...	29.893	77.0	73.0	79	...	10	...	Cum.	
Totals.	...	39	bc	...	10044	95.8	49.2	118	...	69	...	Cum.	
Mean.	SE $\frac{1}{2}$ S.	3		...	29.913	78.0	74.1	80	77.1	6	...	Cum.	

## TUESDAY, 8TH.

2.	SE $\frac{1}{2}$ S.	4	ocq	...	29.864	75.8	72.3	81	...	10	...	Cum str.	At noon, lat. 10° 41' S. long. 142° 34' E. Temperature by self-registering thermo- meter, max. 81°, min. 75°.
4.	SE $\frac{1}{2}$ S.	5	bc	...	29.842	76.8	72.8	79	...	7	...	Cum str.	
6.	SE $\frac{1}{2}$ S.	4	bc	...	29.870	76.8	72.8	79	77.0	9	...	Cum.	
8.	SE $\frac{1}{2}$ S.	5	c	...	29.912	77.3	73.3	79	...	9	...	Cum.	
10.	SE $\frac{1}{2}$ S.	3	c	...	29.923	79.3	74.8	78	...	7	...	Cum.	
Noon.	SE $\frac{1}{2}$ E.	4	c	...	29.893	77.8	73.8	79	77.2	9	...	Cum.	
2.	SE $\frac{1}{2}$ E.	3	bc	...	29.861	78.8	75.0	81	...	8	...	Cum.	
4.	SE $\frac{1}{2}$ S.	4	bcm	...	29.837	77.8	74.8	84	...	2	...	Cum.	
6.	SE $\frac{1}{2}$ S.	5	bc	...	29.813	77.8	73.8	79	...	3	Cir str.	...	
8.	SE $\frac{1}{2}$ S.	5	bc	...	29.916	77.8	74.3	82	...	4	...	Cum.	
10.	SE $\frac{1}{2}$ S.	4	bc	...	29.918	77.3	74.3	84	...	3	...	Cum.	5.30 P.M., anchored off Hammond Island.
Midd.	SE $\frac{1}{2}$ S.	4	bc	...	29.927	77.3	74.8	87	...	5	...	Cum.&Str.	
Totals.	...	50	bc	...	10576	90.6	46.8	972	...	76	Cir str.	Cum. & Cum str.	
Mean.	SE $\frac{1}{2}$ S.	4		...	29.881	77.5	73.9	81	77.1	6	...	Cum. & Cum str.	

## WEDNESDAY, 9TH.

2.	SE $\frac{1}{2}$ S.	4	c	...	29.915	77.5	75.3	88	...	10	...	Cum.	At noon, lat. 10° 35' S. long. 141° 54' E. Temperature by self-registering thermo- meter, max. 80°, min. 76°.
4.	SE $\frac{1}{2}$ S.	3	c	...	29.901	77.5	73.8	80	...	7	...	Cum.	
6.	SE $\frac{1}{2}$ S.	4	c	...	29.914	77.0	74.5	86	...	10	...	Cum.&Str.	
8.	SE $\frac{1}{2}$ S.	3	bc	...	29.949	77.8	74.8	84	77.5	9	...	Cum.&Str.	
10.	SE $\frac{1}{2}$ S.	3	bc	...	29.948	78.8	75.3	82	...	7	...	Cum.	
Noon.	SE $\frac{1}{2}$ S.	3	bc	...	29.948	78.8	75.3	82	77.7	8	...	Cum.&Str.	
2.	SE $\frac{1}{2}$ S.	3	c	...	29.892	79.8	76.0	81	77.7	8	...	Cum.&Str.	
4.	SE $\frac{1}{2}$ S.	3	c	...	29.896	79.3	75.8	83	78.0	10	...	Cum.&Str.	
6.	SE $\frac{1}{2}$ S.	3	cm	...	29.914	78.8	75.8	85	78.5	10	...	Cum.&Str.	
8.	SE $\frac{1}{2}$ S.	4	bc	...	29.951	77.8	75.5	87	78.0	9	...	Cum.&Str.	
10.	SE $\frac{1}{2}$ S.	4	bc	...	29.935	77.8	74.8	84	78.0	6	...	Cum.	Sp. gr. 1.02703.
Midd.	SE $\frac{1}{2}$ S.	3	bc	...	29.930	77.8	75.3	86	78.0	5	...	Cum.	
Totals.	...	40	bc	...	11093	98.7	62.2	48	63.4	99	...	Cum. & Str.	
Mean.	SE $\frac{1}{2}$ S.	3		...	29.924	78.2	75.2	84	77.9	8	...	Cum. & Str.	

## THURSDAY, 10TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>b</sup> N <sup>1</sup> S.	3	bc	...	29.893	77.3	75.0	88	78.0	3	...	Cum.	At noon, lat. 9° 59' s. long. 139° 42' E. Temperature by self-registering thermo- meter, max. 81°, min. 76.7. Current, w. 6'.
4.	E <sup>b</sup> N <sup>1</sup> S.	3	bc	...	29.892	77.8	75.3	86	78.0	8	...	Cum.	
6.	SE <sup>b</sup> E <sup>1</sup> E.	4	bc	...	29.906	77.8	75.0	85	78.0	4	...	Cum.	
8.	SE <sup>1</sup> S.	3	bc	...	29.946	78.8	75.8	85	...	3	Cir.	...	Black bulb 131°. Sp. gr. 1.02616.
10.	SE <sup>1</sup> S.	3	bc	...	29.966	79.3	76.3	85	78.5	3	Cir.	...	
Noon.	E <sup>b</sup> N <sup>1</sup> S.	4	bc	...	29.912	79.5	76.5	85	78.7	3	Cir str.	...	
2.	E <sup>b</sup> N <sup>1</sup> S.	3	bc	...	29.896	79.8	76.3	82	79.0	3	Cir.	Cum.	Black bulb 131°. Sp. gr. 1.02616.
4.	E <sup>b</sup> N <sup>1</sup> S.	3	c	...	29.866	79.3	76.0	84	79.0	10	...	Cum.	
6.	SE <sup>1</sup> S.	3	bc	...	29.876	78.8	76.8	90	79.0	5	Str.	Cum.	
8.	SE <sup>1</sup> S.	3	bc	...	29.931	78.8	76.5	89	78.7	4	Cir.	Cum.	...
10.	SE <sup>1</sup> S.	3	bc	...	29.931	78.5	76.5	89	78.7	7	...	Cum.	
Midt.	SE <sup>1</sup> S.	3	bc	...	29.916	78.0	76.0	89	78.7	2	...	Cm.&Cm.st	
Totals.	...	38	bc	...	10961	103.7	72.0	77	76.3	55	Cir. & Str.	Cum.	
Mean.	SE <sup>b</sup> E.	3		...	29.913	78.6	76.0	86	78.6	5			

## FRIDAY, 11TH.

2.	SE <sup>1</sup> S.	3	bc	...	29.897	78.8	76.3	88	79.0	6	...	Cum.	At noon, lat. 9° 36' s. long. 137° 50' E. Temperature by self-registering thermo- meter, max. 82.5°, min. 77.0. Current, N. 84° w. 10'.
4.	SE <sup>b</sup> E <sup>1</sup> E.	3	bc	...	29.893	78.8	75.8	85	79.0	1	...	Cm.&Str.	
6.	SE <sup>b</sup> E <sup>1</sup> E.	3	bc	...	29.906	78.8	75.8	85	79.0	3	Cir str.	Cum.	
8.	SE <sup>b</sup> E <sup>1</sup> E.	2	bc	...	29.934	79.8	76.8	85	79.0	3	...	Cum.	Black bulb 130°. Sp. gr. 1.02566.
10.	SE <sup>b</sup> E <sup>1</sup> E.	2	bc	...	29.932	80.8	77.3	83	79.0	3	Cir.	Cum.	
Noon.	E <sup>b</sup> N <sup>1</sup> S.	3	bc	...	29.901	79.8	76.3	82	79.5	4	Cir.	Cum.	
2.	E <sup>b</sup> N <sup>1</sup> S.	3	bc	...	29.888	79.5	76.0	83	79.5	4	Cir.	Cum.	...
4.	SE <sup>1</sup> E.	3	bc	...	29.866	79.3	75.8	82	79.5	7	Cir.	Cum.	
6.	SE <sup>1</sup> E.	3	bc	...	29.850	79.3	76.3	85	79.0	4	Cir str.	Cum.	
8.	SE <sup>1</sup> E.	2	bc	...	29.883	78.3	75.5	85	79.0	5	Cir str.	Cum.	...
10.	SE <sup>1</sup> E.	3	bc	...	29.877	78.3	75.8	87	79.0	3	Cir str.	Cum.	
Midt.	SE <sup>1</sup> E.	2	bcl	...	29.875	78.3	75.8	87	79.0	5	Cir.	Cum.	
Totals.	...	31	bc	...	10702	109.8	73.5	57	75	48	Cir. & Str.	Cum.	
Mean.	SE <sup>b</sup> E.	3		...	29.892	79.1	76.1	85	79.1	4			

## SATURDAY, 12TH.

2.	E <sup>b</sup> N <sup>1</sup> S.	2	bcl	...	29.875	78.3	74.8	87	78.7	4	...	Cum.	At noon, lat. 8° 56' s. long. 136° 5' E. Temperature by self-registering thermo- meter, max. 84°, min. 77. Current, w. 8'.
4.	E <sup>b</sup> N <sup>1</sup> S.	1	bc	...	29.872	77.8	75.5	88	78.5	2	Str.	Cum.	
6.	E <sup>b</sup> N <sup>1</sup> S.	2	bc	...	29.896	77.8	76.3	91	79.0	4	...	Cum.	
8.	SE <sup>1</sup> E.	2	bc	...	29.916	78.8	76.8	90	...	2	Cir.	Cum.	Passed through patches of seaweed in forenoon (Trichodesmium Eryth- raeum). Sp. gr. 1.02561.
10.	SE <sup>b</sup> E <sup>1</sup> E.	2	bc	...	29.904	82.8	77.8	76	79.2	4	Cir str.	Cum.	
Noon.	E <sup>1</sup> S.	3	bc	...	29.873	80.8	77.5	84	79.5	3	Cir.	Cum.	
2.	E <sup>1</sup> S.	2	bc	...	29.827	80.3	77.0	84	79.5	4	Cir str.	Cm.&Str.	Sea highly phosphorescent.
4.	E <sup>1</sup> S.	2	...	...	29.775	79.8	76.8	85	80.0	...	Cir.	Cum.	
6.	SE <sup>1</sup> E.	2	...	...	29.789	79.3	76.3	85	...	1	...	Cm.&Str.	
8.	SE <sup>b</sup> E <sup>1</sup> E.	2	bc	...	29.792	78.8	76.3	87	79.5	3	...	Cm.&Str.	...
10.	E <sup>b</sup> N <sup>1</sup> S.	1	bc	...	29.857	78.8	75.8	85	79.5	3	...	Cm.&Str.	
Midt.	SE <sup>1</sup> S.	2	bc	...	29.859	78.5	75.8	86	79.2	3	...	Cm.&Str.	
Totals.	...	23	bcl	...	10235	111.8	76.7	68	92.6	32	Cir. & Str.	Cum. & Str.	
Mean.	E. S. E.	2		...	29.853	79.3	76.4	86	79.2	3			

## SUNDAY, 13th SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 100.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	SE $\frac{1}{2}$ S.	1	bc	1	29.848	78.3	75.0	83	79.0	3	...	Cum.		At noon, lat. 8° 18' S., long. 135° 7' E. Temperature by self-registering thermo- meter, max. 81° 8', min. 77° 2'. Current, w. 20'. Sp. gr. 1.02574. Passed large patches of seaweed re- sembling fish spawn (Trichodes- mium Erythrum). Black bulb in sun 129°.
4.	SE $\frac{1}{2}$ S.	2	bc	...	29.853	78.0	74.8	83	79.0	6	...	Cum.		
6.	SE $\frac{1}{2}$ S.	1	bc	...	29.857	78.3	75.3	84	78.7	9	...	Cum.		
8.	SE $\frac{1}{2}$ E.	2	bc	...	29.859	78.8	75.8	85	79.0	7	...	Cr. cum & Cum.		
10.	SE $\frac{1}{2}$ E.	2	bc	...	29.863	78.8	76.3	87	79.0	4	Cir str.	Cum.		
Noon.	SE $\frac{1}{2}$ E.	1	bc	...	29.865	80.8	76.8	80	79.0	5	Cir str.	Cum.		
2.	SE $\frac{1}{2}$ E.	2	bc	...	29.865	80.3	76.0	79	80.0	6	Cir.	Cr. cum & Str.		
4.	S.S.E.	1	bc	...	29.869	79.8	76.0	81	80.0	6	Cir str.	Cum.		
6.	SE $\frac{1}{2}$ S.	1	bc	...	29.875	79.5	76.0	83	...	4	Cir str.	Cum.		
8.	SE $\frac{1}{2}$ S.	1	bc	...	29.866	78.8	75.8	85	79.5	3	...	Cum.		
10.	S.W.	1	bc	...	29.860	78.8	75.8	85	79.5	1	...	Cum. & Str.		
Midd.	SSW & W.	1	bc	...	29.891	78.8	75.3	82	79.5	1	...	Cum. & Str.		
Totals.	...	16	bc	1	10284	108.7	68.1	34	102.4	55	Cir str.	Cum. & Str.		
Mean.	SE $\frac{1}{2}$ S.	1		1	29.857	79.1	75.7	83	79.3	5				

## MONDAY, 14th.

2.	SSW & S.	1	bcmw	...	29.847	78.5	75.8	85	79.5	2	...	Str.		At noon, lat. 7° 13' S., long. 134° 18' E. Temperature by self-registering thermo- meter, max. 81°, min. 77°. Current SW, 17'. Black bulb in sun 134°. Sp. gr. 1.02559.
4.	SW & W.	2	bcmw	...	29.834	78.3	76.5	90	79.5	4	...	Str. & Cum.		
6.	SE $\frac{1}{2}$ E.	1	bc	...	29.879	77.8	74.8	84	79.2	8	Cir str.	Cum.		
8.	S $\frac{1}{2}$ S.	3	bc	...	29.906	79.3	76.3	85	79.5	7	...	Str. & Cum.		
10.	E $\frac{1}{2}$ S.	3	c	...	29.944	79.3	76.3	85	79.5	10	...	Cr. cum & Cum.		
Noon.	E $\frac{1}{2}$ S.	4	c	1	29.887	79.3	76.3	85	79.5	10	...	Cr. cum & Cum.		
2.	E $\frac{1}{2}$ S.	1	bc	...	29.879	80.3	76.8	83	80.5	8	Cir.	Cum. & Str.		
4.	E $\frac{1}{2}$ S.	2	bc	...	29.879	79.8	76.3	82	80.5	7	Cir.	Cum.		
6.	E $\frac{1}{2}$ S.	1	c	...	29.828	78.8	74.3	77	79.5	10	Cir str.	Cum. & Str.		
8.	SE $\frac{1}{2}$ E.	2	bc	...	29.841	78.8	73.8	75	79.5	8	Cir.	Cum.		
10.	SE $\frac{1}{2}$ E.	1	bc	...	29.920	78.8	74.8	80	79.2	7	Cir str.	Cum.		
Midd.	SE $\frac{1}{2}$ E.	1	bc	...	29.907	77.8	74.8	84	...	8	Cir str.	...		
Totals.	...	22	bcmw	...	10425	106.8	66.8	995	105.9	89	Cir str.	Cr. cum., Cum., & Str.		
Mean.	SE $\frac{1}{2}$ E.	2		1	29.869	78.9	75.6	83	79.6	7				

## TUESDAY 15th.

2.	Calm.	0	bcm	...	29.902	78.3	74.8	82	79.5	4	...	Cum. & Str.		At noon, lat. 6° 31' S., long. 133° 54' E. Temperature by self-registering thermo- meter, max. 82°, min. 77° 2'. Black bulb in sun 134°. Sp. gr. 1.02521.
4.	SE $\frac{1}{2}$ S.	1	bcm	...	29.895	77.8	74.8	84	79.5	3	...	Cum. & Str.		
6.	SE $\frac{1}{2}$ E.	1	bcm	...	29.907	78.8	74.8	80	79.2	4	...	Cum.		
8.	E $\frac{1}{2}$ S.	1	bc	...	29.960	80.8	77.8	85	79.5	5	Cir str.	Str.		
10.	E $\frac{1}{2}$ S.	1	bc	...	29.961	81.3	77.3	80	81.0	4	Cir str.	Cum. & Str.		
Noon.	S $\frac{1}{2}$ E.	2	bc	...	29.932	81.3	76.8	78	...	5	Str.	Cum.		
2.	SW & W.	3	bc	...	29.877	80.5	77.0	82	80.7	6	Cir str.	Cum.		
4.	SW & W.	2	bc	...	29.846	80.0	77.0	85	80.5	8	Cir str.	Cum. & Str.		
6.	S $\frac{1}{2}$ W.	4	bc	...	29.873	79.8	77.8	90	80.0	3	Cir str.	Cum.		
8.	SE $\frac{1}{2}$ E.	3	bc	...	29.912	79.0	76.8	89	80.0	4	...	Cum. & Str.		
10.	S $\frac{1}{2}$ S.	3	bc	...	29.916	79.8	77.5	89	80.0	8	...	Cum. & Str.		
Midd.	SE $\frac{1}{2}$ S.	3	bc	...	29.937	78.8	77.3	92	...	6	...	Cum. & Cum. str.		
Totals.	...	24	bcm	...	10918	116.2	70.7	56	99.9	60	Cir str.	Cum. & Str.		
Mean.	SE $\frac{1}{2}$ E.	2		...	29.909	79.7	76.6	85	80.0	5				

## WEDNESDAY, 16TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE ½ S.	1	bc	...	29.899	78.8	76.8	90	80.3	8	Cir str.	Cum.	At Dobbo harbour. Temperature by self-registering thermo- meter, max. 88° 2, min. 77° 2. 11 A.M., anchored in Dobbo harbour.
4.	SE ½ S.	1 ½	bc	...	29.914	78.3	76.5	90	80.2	9	Cir str.	Cum.	
6.	E ½ S.	1	bc	...	29.943	78.3	76.3	89	...	5	Cir str.	Cum.	
8.	E ½ S.	3	bc	...	29.942	79.3	76.8	88	...	4	...	Cum.	
10.	E ½ S.	3	bc	...	29.927	83.8	78.8	76	...	6	...	Cum.	
Noon.	SE ½ S.	1 ½	bc	...	29.889	84.8	79.3	74	...	5	...	Cum.	
2.	SE ½ S.	1	bc	...	29.833	86.5	79.3	67	...	5	Str.	Cum.	
4.	SE ½ S.	1	bc	...	29.843	85.5	78.8	69	...	7	Str.	Cum.	
6.	SE ½ E.	1 ½	bcp	...	29.843	79.0	77.3	91	80.7	6	Str.	Cum.	
8.	SE ½ E.	1	bc	...	29.863	78.8	76.8	90	...	8	Str.	Cum.	
10.	SE ½ E.	2	bc	...	29.904	79.3	76.8	88	...	5	Str.	Cum.	
Midt.	SE ½ E.	3	bc	...	29.897	78.3	76.3	89	...	8	...	Cum.	
Totals.	...	22	bcp	...	10697	10.7	89.8	1001	11	76	Cir str. & Str.	Cum.	
Mean.	SE ½ E.	2		...	29.891	80.9	77.5	83	80.4	6			

## THURSDAY, 17TH.

2.	SE ½ S.	2	bcl	...	29.877	78.5	76.5	89	...	8	...	Cum.	At Dobbo harbour. Temperature by self-registering thermo- meter, max. 87°, min. 77° 5.
4.	SE ½ S.	1	bcl	...	29.860	78.5	76.3	88	...	9	...	Cum.	
6.	SE ½ S.	2	bc	...	29.880	78.8	76.5	89	...	6	Cir.	Cum.	
8.	SE ½ S.	1	bc	...	29.911	78.5	75.8	85	...	7	Cir str.	Cum.	
10.	SE ½ S.	1	bc	...	29.901	82.8	76.8	72	...	5	Cir str.	Cum.	
Noon.	SE ½ S.	2	bc	...	29.877	84.8	77.8	68	...	7	Cir str.	Cum.	
2.	SE ½ E.	1	bc	...	29.810	84.8	77.8	68	...	4	Cir str.	Cum.	
4.	SE ½ E.	1	bc	...	29.778	84.8	78.0	69	...	6	Cir str.	Cum.	
6.	SE ½ S.	2	bc	...	29.784	82.8	76.8	72	81.0	5	Cir.	Cm.&Str.	
8.	SE ½ S.	3	bc	...	29.831	81.0	76.5	78	81.2	2	Cir.	...	
10.	SE ½ S.	2	bl	...	29.837	79.8	77.8	90	...	0	...	...	
Midt.	SE ½ S.	3	bcl	...	29.842	79.8	78.3	92	...	1	Cir.	...	
Totals.	...	21	bcl	...	10188	14.9	84.9	960	...	60	Cir. & Cir str.	Cum.	
Mean.	S.E.	2		...	29.849	81.2	77.1	80	81.1	5			

## FRIDAY, 18TH.

2.	SE ½ E.	2	bew	...	29.813	79.3	76.8	88	...	2	...	Cm.&Str.	At Dobbo harbour. Temperature by self-registering thermo- meter, max. 81° 7, min. 76° 0. From 9.45 A.M. to 11.20 A.M. experi- enced heavy rain, accompanied by vivid lightning and thunder.
4.	SE ½ E.	2	bew	...	29.818	78.8	76.3	88	...	3	...	Str.	
6.	SE ½ E.	1	bc	...	29.850	78.3	75.8	87	80.7	5	Cir.	Cm.&Str.	
8.	SE ½ S.	3	bc	...	29.876	78.5	76.3	87	...	9	...	Cum.	
10.	SE ½ S.	6	crlt	...	29.923	78.8	76.3	88	...	10	...	Nimb.	
Noon.	SE ½ E.	1	e	...	29.895	76.8	74.8	89	...	8	Cir str.	Cum.	
2.	SE ½ E.	1	bc	...	29.829	79.8	75.8	80	...	10	Cir str.	Cum.	
4.	SE ½ S.	1	bc	...	29.803	80.8	75.8	76	...	9	Cir str.	Cum.	
6.	SE ½ S.	1	bc	...	29.806	78.8	75.8	85	81.0	7	Str.	Cum.	
8.	Calu.	0	bc	...	29.857	78.5	76.0	86	...	9	...	Cum.	
10.	Calu.	0	bcm	...	29.880	78.3	75.8	87	...	7	Cir.&Cir str.	...	
Midt.	SE ½ S.	1	bcm	...	29.877	78.3	75.5	85	...	7	Cir str.	Cum.	
Totals.	...	19	bcm	...	10227	105.0	71.0	66	17	86	Cir str.	Cum. & Str.	
Mean.	SE ½ S.	2		...	29.852	78.7	75.9	85	80.8	7			

## SATURDAY, 19TH SEPTEMBER 1871.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.				Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity.	Sat. = 100.			Upper.	Lower.	
2.	S.E.S.	12	bcm	...	29.866	77.8	74.8	84	...	...	7	Str.	Cum.	At Dobbo harbour. Temperature by self-registering thermometer, max. 82°, min. 74° 7.
4.	Calm.	0	bc	...	29.845	77.8	75.3	86	...	...	8	...	Cum.	
6.	Calm.	0	bc	...	29.863	78.0	75.3	85	80.5	...	6	Cir str.	Str.	
8.	E.S.	1	c	...	29.887	77.8	74.8	84	...	...	9	Cir str.	Str.	
10.	S.E.S.	1	bcp	...	29.912	79.5	77.0	87	...	...	7	Str.	Cum.	
Noon.	S.E.S.	1	cp	...	29.890	81.3	77.8	83	...	...	10	...	Cum.	
2.	S.E.E.	1	or	...	29.847	80.8	78.0	86	...	...	10	...	Cm.&Str.	
4.	S.E.E.	2	bcp	...	29.813	80.3	77.5	85	...	...	8	...	Cm.&Cm.	
6.	S.E.E.	2	bc	...	29.815	78.8	75.8	85	80.7	...	9	Str.	Cum.	
8.	S.E.S.	2	bc	...	29.835	76.8	75.3	91	...	...	6	Cir.	Str.	
10.	S.E.S.	1	bc	...	29.872	76.8	74.8	89	...	...	1	Cir str.	...	
Midt.	Calm.	0	bc	...	29.866	76.5	74.5	89	...	...	4	Cir str.	...	
Totals.	...	13	bcp	...	10311	102.2	70.9	74	...	...	85	Cir str. & Str.	Cum. & Str.	
Mean.	S.E.	1		...	29.859	78.5	75.9	86	80.6	...	7			

## SUNDAY, 20TH.

2.	S.E.S.	1	bc	...	29.819	76.0	73.5	87	...	...	9	...	Cm.&Cm.	At Dobbo harbour.
4.	S.E.S.	1	bc	...	29.819	75.5	73.3	88	...	...	5	Cir str.	Str.	
6.	S.E.S.	1	bc	...	29.823	76.8	73.3	82	80.5	...	8	Cir str.	Str.	
8.	Calm.	0	c	...	29.885	78.3	75.8	87	...	...	10	...	Str.&Cum.	
10.	Calm.	0	bc	...	29.882	80.8	76.8	80	...	...	8	Cir str.	Str.&Cum.	
Noon.	swbw	2	bc	...	29.833	80.8	76.8	80	...	...	5	Cir str.	Str.&Cum.	
2.	Calm.	0	bcp	...	29.793	77.5	75.5	89	...	...	8	...	Str.&Cum.	
4.	sw	1	bc	...	29.778	80.3	77.3	85	...	...	6	...	Str.&Cum.	
6.	sw	1	bc	...	29.797	79.5	76.8	86	80.5	...	5	Cm.&Cm.	Str.	
8.	sw	2	b	...	29.811	79.5	75.8	81	...	...	6	Cir.&Str.	Cum.	
10.	sw	1	bc	...	29.872	79.8	76.8	85	...	...	6	Cir.	Cum.	
Midt.	sw	2	...	...	29.863	78.8	75.8	85	...	...	...	...	...	
Totals.	...	12	bcp	...	9975	103.6	67.5	55	...	...	76	Cir. & Cir str.	Cm.&Str.	
Mean.	Variable.	1		...	29.831	78.6	75.6	85	80.5	...	7			

## MONDAY, 21st.

2.	sw	2	bc	...	29.837	78.8	75.8	85	...	...	6	...	Cum.	At Dobbo harbour.
4.	swbw	1	bc	...	29.835	78.8	76.8	90	...	...	8	...	Cum.	
6.	Variable.	0	bc	...	29.852	77.3	75.8	91	...	...	9	...	Cm.&Cm.	
8.	Variable.	1	bc	...	29.880	79.5	77.8	91	79.7	...	8	...	Cm.&Cm.	
10.	w	1	bc	...	29.863	79.8	76.3	82	...	...	6	...	Cm.&Cm.	
Noon.	sw	2	bc	...	29.813	80.8	75.8	76	...	...	5	Cir str.	Cum.	
2.	swbw	2	bc	...	29.774	80.8	76.8	80	...	...	5	Cir str.	Cum.	
4.	S.E.S.	1	bc	...	29.761	82.3	77.3	76	...	...	7	...	Cum.	
6.	Variable.	1	bcp	...	29.765	80.3	76.3	80	82.0	...	7	Cir.	Cum str.	
8.	Calm.	0	bc	...	29.820	78.5	75.5	84	...	...	2	Cir.	...	
10.	S.E.S.	1	bc	...	29.831	77.8	73.8	79	...	...	3	...	Cum.	
Midt.	Calm.	0	bc	...	29.827	77.3	74.8	87	...	...	4	Cir.	Cum.	
Totals.	...	12	bcp	...	9858	112.0	72.8	100.1	17	70		Cir str.	Cum. & Cum str.	
Mean.	Variable.	1		...	29.821	79.3	76.1	83	80.6	...	6			

## TUESDAY, 22d SEPTEMBER 1874.

Hour.	Wind.		Weather	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bew	...	29.799	76.8	74.8	89	...	4	Cir.	Cm.&Str.	At Dobbo harbour.  Very heavy dew to 4 A.M.
4.	Calm.	0	bew	...	29.791	76.8	74.8	89	...	5	...	Cum.	
6.	Calm.	0	bc	...	29.831	76.3	74.8	91	80.7	6	...	Cm.&Str.	
8.	Calm.	0	bc	...	29.846	78.8	76.8	90	...	4	...	Cum.	
10.	Variable.	2	bc	...	29.865	81.8	77.8	80	...	4	...	Cum.	
Noon.	SE by S.	1	bc	...	29.829	84.3	77.5	69	...	4	...	Cum.	
2.	SW by N.	2	bc	...	29.801	81.8	75.8	72	...	4	Cir.	Cum.	
4.	SW by N.	2	bc	...	29.781	81.8	76.8	76	...	5	Cir.	Cum.	
6.	W by S.	1	bc	...	29.777	81.3	76.8	78	80.5	6	Cir.	Cm.&Str.	
8.	W by S.	0	bc	...	29.827	81.5	77.3	79	...	4	...	Cum.	
10.	W by S.	1	bc	...	29.865	80.3	77.5	86	...	6	...	Cum.	
Midd.	SE by E.	3	bc	...	29.858	79.8	76.8	85	...	5	...	Cum.	
Totals.	...	12	bc	...	9870	1.3	77.5	984	...	57	Cir.	Cm.&Str.	
Mean.	Variable.	1		...	29.823	80.1	76.5	82	80.6	5			

## WEDNESDAY, 23d.

2.	SE by S.	1	bc	...	29.823	79.3	76.3	85	...	1	...	Cum.	At noon, lat. 5° 41' S. long. 134° 5' E. Temperature by self-registering thermo- meter, max. 84°, min. 79°. 7.30 A.M., left Dobbo harbour. Black bulb 132°. Sp. gr. 1.02515.
4.	SE by S.	2	bc	...	29.813	78.8	75.8	85	...	4	...	Cum.	
6.	SE by S.	1	bc	...	29.845	78.3	76.3	89	...	6	Cir.	Cm.&Str.	
8.	SE by S.	1	bc	...	29.908	81.0	77.5	82	...	4	Cir str.	Cum.	
10.	SE by S.	1	bc	...	29.907	81.5	77.8	82	...	6	Cir.	Cm.&Str.	
Noon.	SE by S.	2	bc	...	29.861	81.8	77.5	79	79.5	5	Cir.	Cm.&Str.	
2.	SW by W.	1	bc	...	29.811	82.8	77.0	73	82.2	4	Cir.	Cm.&Str.	
4.	SW by W.	2	bclt	...	29.809	81.0	76.2	77	82.0	8	Cir str.	Cum.	
6.	SE by S.	1	bcl	...	29.837	79.5	77.8	91	81.5	8	...	Cm.&Nb.	
8.	SW by W.	2	bcl	...	29.871	78.5	76.5	89	81.0	6	...	Cir.cum.&str.	
10.	SE by E.	1	bcl	...	29.893	79.5	76.3	84	81.2	8	...	Cum.	
Midd.	SE by E.	2	bcl	...	29.874	79.8	76.3	82	81.5	5	Cir str.	Cum.	
Totals.	...	17	bcl	...	10252	1.8	81.3	38	8.9	65	Cir. & Cir str.	Cm.&Str.	
Mean.	S.S.E.	1		...	29.854	80.1	76.8	83	81.3	5			

## THURSDAY, 24th.

2.	E.S.E.	2	bc	1	29.837	79.3	76.3	85	81.5	7	Cir cum.	Cum.	At noon, lat. 5° 18' S. long. 133° 15' E. Temperature by self-registering thermo- meter, max. 85°, min. 78.5. Sp. gr. 1.02600.
4.	E.S.E.	2	bc	1	29.826	79.3	76.0	84	81.5	4	...	Cum.	
6.	E.S.E.	2	bc	...	29.857	79.8	76.0	81	81.5	5	Cir str.	Cum.	
8.	E by S.	1	bc	...	29.889	80.3	76.3	80	81.5	6	Cir cum.	Cum.	
10.	E by S.	1	bc	1	29.894	81.8	77.3	78	...	6	Cir str.	Cum.	
Noon.	E.	2	bc	1	29.863	82.8	78.3	78	82.0	5	Cir str.	Cum.	
2.	E.	1	bc	...	29.831	82.8	77.8	76	82.0	5	Cir str.	Cum.	
4.	S.W.	1	bc	...	29.823	82.8	77.8	76	82.7	5	Cir.	Cum.	
6.	S.	1	bc	...	29.828	81.8	76.8	76	...	7	Cir str.	Cir cum.	
8.	Variable.	1	bc	...	29.837	81.8	77.3	78	83.0	7	Cir str.	Cm.&Str.	
10.	Calm.	0	bc	...	29.882	80.8	77.8	85	...	6	...	Cm.&Str.	6.15 P.M., anchored at Ki Doulan.
Midd.	Calm.	0	bc	...	29.868	79.8	77.3	87	...	2	...	Str.	
Totals.	...	14	bc	...	10235	13.1	85.0	4	15.7	65	Cir str.	Cm.&Str.	
Mean.	SE by E.	1		1	29.853	81.1	77.1	80	81.9	5			

## FRIDAY, 25TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, at Sea Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	Calm.	0	bc	...	29.841	79.8	77.5	89	...	2	...	Cm.&Str.	At Ki Doulan, Temperature by self-registering thermo- meter, max. 84° 5, min. 78°.
4.	Calm.	0	bc	...	29.839	79.5	76.5	85	...	6	...	Cum.	
6.	s.s.w.	1	bc	...	29.863	78.8	76.8	90	...	1	...	Cum.	
8.	Variable.	0	bc	...	29.913	81.3	77.8	83	...	6	...	Cum.&Cm	
10.	Variable.	1	bc	...	29.912	81.8	77.8	83	...	7	...	Cir str.	
Noon.	w.	1	bep	...	29.883	79.8	75.8	80	...	9	...	Cum.	
2.	s.s.w.	1	bep	...	29.824	82.3	77.3	76	...	5	...	Cum.	
4.	Calm.	0	bep	...	29.793	82.3	78.3	80	...	8	...	Cm.&Str.	
6.	s.w.	1	bc	...	29.803	82.8	78.3	74	82.0	6	...	Cum.	
8.	Calm.	0	bc	...	29.861	80.8	76.8	86	...	1	...	Cum.	
10.	Calm.	0	bc	...	29.863	78.8	76.3	87	...	2	...	Cum.	
Midt.	Calm.	0	bc	...	29.866	77.8	75.8	89	...	3	...	Cir.	Cum.
Totals.	...	...	bep	...	10261	6.8	85.0	33	...	56	...	Cir str.	Cum. & Str.
Mean.	Calm.	0		...	29.855	80.6	77.1	83	82.0	5			

## SATURDAY, 26TH.

2.	Calm.	0	bw	...	29.841	76.3	74.0	88	...	0	...	...	At noon, lat. 5° 42' s. long. 132° 25' e. Temperature by self-registering thermo- meter, max. 84° 5, min. 74°. 6.30 A.M., left Ki Doulan for Banda.
4.	Calm.	0	bw	...	29.824	75.8	73.8	89	...	0	...	...	
6.	s.s.w.	1	bc	...	29.851	75.8	73.8	89	...	1	...	Cum.	
8.	w.s.w.	1	bc	...	...	79.8	77.5	89	80.7	3	...	Cir.	
10.	s.w.	1	bc	...	29.911	82.3	78.3	80	82.2	5	...	Cum.	
Noon.	Variable.	1	bc	...	29.870	83.3	78.8	78	82.0	4	...	Cum.	
2.	s.s.w.	1	bc	...	29.827	82.8	76.8	72	82.0	5	...	Cir.	
4.	w.s.w.	2	bc	...	29.814	82.5	77.5	76	82.5	4	...	Cir.	
6.	s.w.	1	bc	...	29.826	81.8	76.8	76	82.0	3	...	Cir.	
8.	s.w.	2	bc	...	29.871	81.5	76.8	77	82.0	3	...	Cm.&Str.	
10.	s.w.	2	bc	...	29.866	81.0	76.8	79	82.0	4	...	Cum.	Sp. gr. 1.02609.
Midt.	s.w.	2	bc	...	29.899	80.8	77.0	81	81.5	6	...	Cir str.	
Totals.	...	14	bew	...	9430	3.7	77.9	14	17.9	38	...	Cir.	Cm.&Str.
Mean.	s.w.	1		...	29.857	80.3	76.5	81	82.0	3			

## SUNDAY, 27TH.

2.	s.w.	1	bc	...	29.860	80.8	76.8	80	81.5	5	Cir str.	Cum.	At noon, lat. 5° 42' s. long. 132° e. Temperature by self-registering thermo- meter, max. 80°, min. 79°.
4.	s.w.	2	bc	...	29.860	80.8	76.8	80	82.0	6	...	Cum.	
6.	w.s.w.	1	bc	...	29.886	80.3	76.8	82	81.5	4	Cir str.	Cum.	
8.	w.s.w.	2	bc	...	29.936	80.8	77.8	85	81.5	5	Cir str.	Cum.	
10.	w.s.w.	1	bc	1	29.933	82.5	78.8	82	82.0	6	...	Cum.	
Noon.	w.s.w.	2	bc	1	29.906	84.8	78.8	72	82.5	5	Cir.	Cum.	
2.	w.s.w.	2	bc	1	29.869	84.5	78.8	73	81.5	6	Cir str.	Cum.	
4.	n.w.	3	bc	1	29.846	84.5	78.5	72	82.5	5	Cir.	Cm.&Nb.	
6.	w.s.w.	2	bc	...	29.864	82.8	77.8	76	82.0	5	...	Cm.&Str.	
8.	w.s.	2	bc	...	29.902	81.8	77.8	80	82.0	5	...	Cm.&Str.	
10.	w.s.	2	bc	...	29.928	82.0	77.8	79	82.0	4	Cir.	Cum.	Black bulb in sun 130°. Sp. gr. 1.02629.
Midt.	s.w.	1	bcl	1	29.931	81.8	77.8	80	81.5	4	Cir.	Cum.	
Totals.	...	21	bcl	...	16712	27.4	94.3	941	22.5	60	Cir. & Cir str.	Cum. & Str.	
Mean.	w.	2		1	29.893	82.3	77.9	78	81.9	5			

## MONDAY, 28TH SEPTEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.	0	bcm	0	29.882	81.0	76.8	79	81.7	9	Cir cum.	Cum.	At noon, lat. 5° 24' s. long. 130° 36' E. Temperature by self-registering thermo- meter, max. 85° 5, min. 79° 5. Current, N. 52° W. 11'. 6 A.M., numerous porpoise seen. Sp. gr. 1.02587. Black bulb in sun 131°. Observed a water-spout. Passed several logs of wood. Some gannet, boobies, and frigate birds seen. 11 P.M., heavy rain squall.
4.	w.b.s.	2	bcm	0	29.866	81.2	77.3	80	82.0	7	Cir cum.	Cum.	
6.	w.b.s.	0	bc	...	29.891	80.8	76.8	80	82.0	7	Cir str.	Cum.	
8.	w.	1	bc	...	29.913	81.8	77.3	78	82.0	4	Cir str.	Cm.&Cmst	
10.	s.w.	2	bc	...	29.919	84.0	79.0	76	83.5	6	Cir str.	Cm.&Str.	
Noon.	sw'bs.	1	bc	...	29.890	84.0	78.8	75	83.5	5	Cir str.	Cum.	
2.	sw'bs.	2	bc	...	29.843	84.5	78.8	73	83.5	6	...	Cum.	
4.	sw'bs.	1	bc	...	29.830	83.8	77.8	72	84.0	5	Cir.	Cum.	
6.	sw'bs.	2	bc	...	29.858	82.8	77.3	74	...	5	Cir.	Cum.	
8.	Variable.	0	bc	...	29.873	82.8	77.8	76	83.0	3	...	Cum.	
10.	s.	1	bc	...	29.918	81.8	76.8	76	82.5	4	Cir. & Cir. c.	Cum.	
Midt.	s.s.e.	1	bcp	...	29.894	79.3	74.3	75	82.5	8	Cir str.	Cum.	
Totals.	...	13	bcm	...	10577	27.8	88.8	74	30.2	69	Cir str.	Cum.	
Mean.	s.w.	1	...	...	29.881	82.3	77.4	76	82.7	6			

## TUESDAY, 29TH.

2.	w.	1	bcl	...	29.871	80.8	77.8	85	82.5	5	Cir cum.	Cum.	At noon, lat. 4° 34' s. long. 129° 59' E. Temperature by self-registering thermo- meter, max. 83°, min. 79°.5. 5.50 P.M., heavy rain squall. Numerous porpoise seen. 3 P.M., anchored in Banda harbour.
4.	Calm.	0	bcl	...	29.879	80.8	77.0	81	82.7	7	Cir.	Cum.	
6.	Variable.	0	bcp	...	29.889	79.5	77.0	88	82.2	10	Cir cum.	Cm.&Nb.	
8.	N.N.E.	1	bc	...	29.921	81.0	77.5	82	83.0	6	Cir.	Cum.	
10.	N.N.E.	1	bc	...	29.928	81.8	77.3	78	83.0	7	Cir.	Cum.	
Noon.	s.	2	bc	...	29.916	80.8	76.8	80	82.5	6	Cir str.	Cum.	
2.	Calm.	0	bc	...	29.843	82.5	76.8	73	82.5	8	Cir str.	Cum.	
4.	s.	1	bc	...	29.834	81.8	75.8	72	...	5	Cir str.	Cum.	
6.	s.	1	bc	...	29.861	81.3	77.3	80	82.0	6	...	Cm.&Str.	
8.	Calm.	0	bc	...	29.904	80.5	77.0	83	...	5	...	Cm.&Str.	
10.	Calm.	0	bc	...	29.914	79.8	76.8	85	...	8	Cir str.	Cum.	
Midt.	Calm.	0	bc	...	29.911	79.8	76.8	85	...	7	Str.	Cum.	
Totals.	...	7	bcp	...	10671	10.4	83.9	12	20.4	80	Cir. & Str.	Cum. & Str.	
Mean.	Variable.	1	...	...	29.889	80.9	77.0	81	82.5	7			

## WEDNESDAY, 30TH.

2.	Calm.	0	bc	...	29.888	79.3	76.8	88	...	5	...	Cum.	At Banda. Temperature by self-registering thermo- meter, max. 81°, min. 76° 5.
4.	s.w.	1	bcp	...	29.880	78.3	76.3	89	...	7	...	Cm.&Str.	
6.	s.w.	1	bc	...	29.889	77.8	74.8	84	81.5	9	...	Cum.	
8.	Calm.	0	bc	...	29.937	78.8	75.8	85	...	8	...	Cm.&Str.	
10.	E.S.E.	1	bc	...	29.927	78.8	74.8	80	...	9	...	Cm.&Str.	
Noon.	Variable.	2	bcp	...	29.901	77.8	74.8	84	...	10	...	Cum.	
2.	s.s.w.	1	bc	...	29.846	77.8	75.8	89	...	7	Cir.	Cum.	
4.	Calm.	0	bc	...	29.833	80.8	77.8	85	...	4	Cir.	Cum.	
6.	Calm.	0	bc	...	29.847	79.8	76.8	85	82.0	4	Cir.	Cum.	
8.	Calm.	0	bc	...	29.884	79.5	77.3	89	...	5	...	Cum.	
10.	Calm.	0	bc	...	29.932	78.8	76.8	90	...	4	Cir.	Cum.	
Midt.	Calm.	0	bc	...	29.927	78.3	76.8	91	...	4	Cir.	Cum.	
Totals.	...	...	bcp	...	10691	105.8	74.6	79	...	76	Cir.	Cum. & Str.	
Mean.	Calm.	0	...	...	29.891	78.8	76.2	87	81.7	6			

## THURSDAY, 1ST OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.	Upper.				Lower.		
2.	S. E.	1	bc	...	29.913	78.8	76.3	88	...	5	Cir.	Cum.	At noon, lat. 4° 10' s. long. 129° 50' E. Temperature by self-registering thermo- meter, max. 83° 7', min. 77°.	
4.	Calm.	0	bc	...	29.893	78.3	75.8	87	...	1	...	Cum.		
6.	E.	2	bc	...	29.928	78.8	74.8	80	...	8	Cir str.	Cum.		
8.	E.S.	2	bc	...	29.935	80.8	75.3	74	83.0	5	Cir str.	Cum.		
10.	E.S.	1	bc	...	29.934	81.5	77.3	79	83.5	5	Cir.	...		
Noon.	S.W.	2	bc	...	29.901	81.8	76.8	76	81.0	4	Cir str.	...		
2.	S.	1	bc	...	29.862	82.8	77.0	73	83.5	4	Cir str.	Cum.		
4.	S.	3	bc	...	29.850	82.0	76.8	75	83.0	5	...	Cum.		
6.	S.	1	bc	...	29.880	81.5	75.0	70	...	6	Cir str.	Cum.		
8.	W.	1	bc	...	29.896	79.8	74.8	75	...	2	...	Cum.		
10.	Calm.	0	bc	...	29.925	79.5	74.5	75	...	3	...	Cum.		
Midt.	S.W.	1	bc	...	29.914	79.0	73.8	74	...	2	...	Cum.		
Totals.	...	15	bel	...	10831	4.6	68.2	86	17.0	50	Cir str.	Cum.		
Mean.	Vble.	1		...	29.903	80.4	75.7	77	83.4	4				

## FRIDAY, 2d.

2.	Variable.	1	bc	...	29.889	77.8	73.8	79	...	1	Cir str.	...	At Banda. Temperature by self-registering thermo- meter, max. 83° 5, min. 77°.  2.30 P.M., heavy rain squall.
4.	Calm.	0	bc	...	29.887	76.8	74.0	85	...	2	Cir.	Cum.	
6.	Calm.	0	bc	...	29.915	78.3	74.8	82	82.5	7	Str.	Cum.	
8.	Calm.	0	o	...	29.937	79.3	75.3	80	...	10	...	Str.	
10.	S.E.	1	c	...	29.958	81.3	75.0	71	...	8	...	Str.	
Noon.	S.E.	2	c	...	29.926	82.8	76.3	70	...	9	Cir str.	Cum.	
2.	S.E.	1	c	...	29.887	82.5	77.3	75	...	8	...	Cum.	
4.	S.W.	2	c	...	29.882	79.5	75.3	79	...	10	...	Cm.&Str.	
6.	s.	0	bc	...	29.901	78.8	75.8	85	83.0	3	Cir.	Cum.	
8.	s.	1	bel	...	29.911	79.8	76.3	82	...	4	Str.	Cum.	
10.	E.	0	orlt	...	29.938	79.8	76.8	85	82.5	10	...	Cm.&Str.	
Midt.	E.	1	oplt	...	29.922	79.3	75.3	80	82.2	10	...	Cum str.	
Totals.	...	9		...	10953	116.0	66.0	953	10.2	82			
Mean.	Variable.	1	bcrltq	...	29.913	79.7	75.5	79	82.6	7	Cir str.	Cum. & Str.	

## SATURDAY, 3d.

2.	swbs.	3	clt	...	29.881	78.8	75.3	82	81.5	9	...	Cum.	At noon, lat. 4° 21' S. long. 129° 7' E. Temperature by self-registering thermo- meter, max. 82°, min. 75°. Current, s. 66 w. 10'. Sp. gr. 1.02622. 2.15 P.M., heavy rain squall.
4.	S.	0	bel	...	29.876	79.0	75.8	84	81.5	5	Cir.	Cum.	
6.	Calm.	0	bel	...	29.913	78.8	75.8	85	82.0	8	Cir.	Cum.&Cm	
8.	S.W.	1	belt	...	29.951	79.3	76.0	84	82.0	6	...	Cum.	
10.	S.E.	0	cpt	...	29.958	78.0	75.8	88	82.5	10	...	Cm.&Nb.	
Noon.	S.E.	1	cp	...	29.929	77.0	74.3	86	...	9	...	Cum.	
2.	S.E.	1	bc	...	29.875	80.8	76.8	80	82.0	5	...	Cm.&Nb.	
4.	S.S.E.	4	orpq	...	29.857	76.8	74.8	89	82.0	10	...	Str.	
6.	S.S.E.	2	od	...	29.901	76.8	74.8	89	82.0	10	...	Cum str.	
8.	N.E.	2	ocl	...	29.937	78.3	74.8	82	82.0	9	...	Cm.&Str.	
10.	S.E.	1	ol	...	29.931	77.8	74.8	84	82.2	10	...	Cum.	
Midt.	N.E.	2	belt	...	29.926	77.8	75.8	89	82.0	8	Cir cum.	Cum.	
Totals.	...	17		...	10935	99.2	64.8	62	21.7	99			
Mean.	Variable.	1		cpolt	...	29.911	78.3	75.4	85	82.0	8	Cir. & Cum.	Cum., Str., & Nimb.

## SUNDAY, 4TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	2	bcl	...	29.863	78.8	75.5	84	81.7	8	...	Cum.	At noon, lat. 3° 56' S. long. 128° 11' E. Temperature by self-registering thermo- meter, max. 80° 7', min. 75° 7'. 9 to 10 A.M., frequent heavy showers.
4.	N.E.	1	bcl	...	29.865	78.8	75.3	82	81.7	9	...	Cum.&Str.	
6.	N.E.	2	bc	...	29.869	79.3	75.8	83	82.0	9	Str.	Cum str.	
8.	E. S. E.	1	bc	...	29.931	77.8	74.3	82	82.5	...	...	Cum str.	
10.	E. S. E.	5	cpq	...	29.943	77.0	74.8	88	82.5	10	...	Cum.&Nl.	
Noon.	E.N.	1	cp	...	29.905	77.8	75.8	89	82.0	9	...	Cum.&Cumstr.	
2.	E. N. E.	2	cp	...	29.846	78.3	75.8	87	82.0	9	...	Cum str.	
4.	Calu.	1	c	...	29.840	77.8	75.3	86	82.0	10	...	Cum str.	
6.	E.	1	c	...	29.866	77.8	76.3	91	...	8	...	Cum.	
8.	E.	1	c	...	29.896	77.5	75.8	90	81.7	9	...	Cum.	
10.	Calu.	0	bcp	...	29.933	77.3	75.3	89	...	6	...	Cum.	5.30 P.M., anchored at Amboina.
Midd.	N. E.	1	bc	...	29.913	76.8	75.8	94	...	3	...	Cum.	
Totals.	...	17	bcqpl	...	10621	95.0	65.8	85	18.1	98	...	Str.	Cum. & Cum str.
Mean.	E.N.	1		...	29.891	77.9	75.5	87	82.0	8	...		

## MONDAY, 5TH.

2.	Calu.	0	bew	...	29.888	75.8	74.3	91	...	4	...	Cum.&Str.	At Amboina. Temperature by self-registering thermo- meter, max. 83° 7', min. 74° 5'.
4.	Calu.	0	bew	...	29.869	75.8	73.8	89	...	3	...	Cum.	
6.	Calu.	0	bem	...	29.897	75.8	74.3	92	81.0	8	Cir str.	Cum.	
8.	Calu.	0	bc	...	29.941	78.3	76.3	89	...	8	Cir.	Cum.	
10.	E.	1	bc	...	29.937	79.8	76.3	82	...	6	Cir.	Cum.	
Noon.	E.	2	bc	...	29.904	81.5	76.3	75	...	9	...	Cum.&Str.	
2.	S. E.	1	bc	...	29.839	81.8	75.8	72	...	6	...	Cum.	
4.	S. E.	3	bc	...	29.827	82.0	76.5	74	...	7	...	Cum.	
6.	S. E.	1	bc	...	29.873	81.3	76.8	78	81.5	7	...	Cum.	
8.	S. E.	1	bc	...	29.909	79.5	76.5	85	...	8	...	Cum.	
10.	Calu.	0	bc	...	29.913	78.3	75.8	87	...	8	...	Cum.	
Midd.	Calu.	0	bc	...	29.916	77.8	75.3	86	...	5	...	Cum.	
Totals.	...	9	bemw	...	10713	107.7	68.0	1000	...	79	...	Cir str.	Cum.&Str.
Mean.	E.S.	1		...	29.893	78.9	75.7	83	81.2	7	...		

## TUESDAY, 6TH.

2.	E.	1	bc	...	29.870	76.8	73.8	84	...	3	...	Cum.	At Amboina. Temperature by self-registering thermo- meter, max. 84° 5'.
4.	Variable.	1	bc	...	29.859	76.8	74.8	89	...	8	...	Cum.	
6.	E.	1	c	...	29.925	76.8	74.8	89	81.0	10	...	Cum.	
8.	Calu.	0	bc	...	29.926	79.3	76.8	88	...	8	...	Cum.	
10.	E.	1	c	...	29.936	81.8	76.8	76	...	9	...	Cum.	
Noon.	E.	1	bcp	...	29.922	81.3	76.8	78	...	9	...	Cum.	
2.	E.	3	bcp	...	29.882	80.3	76.3	80	...	9	...	Cum.	
4.	E.	2	bcp	...	29.878	79.3	74.8	78	...	9	...	Cum.	
6.	E.	0	oc	...	29.880	79.0	75.3	81	81.2	10	...	Cum.	
8.	E.	1	cp	...	29.845	76.8	75.8	94	...	10	...	Cum.	
10.	E.	1	c	...	29.921	76.8	73.8	84	...	10	...	Cum.	
Midd.	E.	1	bcp	...	29.927	76.3	73.8	86	...	9	...	Cum.	
Totals.	...	13	bcp	...	10771	101.3	63.6	1007	...	104	...		Cum.
Mean.	E.	1		...	29.898	78.4	75.3	81	81.1	9	...		

## WEDNESDAY, 7TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and sea-level.	Thermometer.				Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. at 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	E.	1	c	...	29.888	75.8	73.5	88	...	9	...	Cum.	At Amboina. Temperature by self-registering thermo- meter, min. 71°.
4.	E.	1	cp	...	29.878	75.5	73.5	89	...	10	...	Cum.	
6.	E.	0	c	...	29.913	74.8	72.0	85	81.0	10	...	Cm.&Cmst	
8.	N.E.	2	cp	...	29.996	75.8	72.8	84	...	10	...	Cm.&Cmst	
10.	E.N.E.	1	cp	...	29.939	78.3	74.8	81	...	10	...	Cm.&Cmst	
Noon.	E.S.E.	2	c	...	29.892	81.8	76.8	76	...	9	...	Cum.	
2.	E.S.E.	1	bc	...	29.848	83.5	76.3	67	...	8	...	Cum.	
4.	E.S.E.	2	bc	...	29.837	83.8	76.0	65	...	6	...	Cir.	
6.	E.S.E.	1	bc	...	29.838	79.8	75.8	80	81.5	4	...	Cm.&Str.	
8.	Calm.	0	bc	...	29.883	79.8	75.8	80	...	6	...	Cum.	
10.	Calm.	0	bc	...	29.915	78.8	75.8	85	...	5	...	Cum.	
Midt.	N.E.	2	cl	...	29.909	77.8	74.8	84	...	10	...	Cum.	
Totals.	...	13	bcpl	...	107.36	105.5	57.9	4	...	97	...	Cum., Str., & Cum str.	
Mean.	E.	1		...	29.895	78.8	74.8	80	81.2	8	...	Cir.	

## THURSDAY 8TH.

2.	N.E.	2	cb	...	29.885	76.8	72.8	79	...	9	...	Cum.	At Amboina.
4.	Calm.	0	c	...	29.875	75.8	72.5	83	...	8	...	Cum.	
6.	Calm.	0	bc	...	29.894	79.8	77.8	90	82.0	7	...	Cir.	
8.	Calm.	0	bc	...	29.904	77.8	74.8	84	...	8	...	Cir.	
10.	E.	2	bc	...	29.917	81.0	75.0	72	...	9	...	Cum.	
Noon.	E.	1	bc	...	29.872	81.8	75.5	71	...	8	...	Cum.	
2.	S.E.	0	bc	...	29.859	81.0	75.8	75	...	8	...	Cir str.	
4.	E.S.E.	1	bc	...	29.831	80.8	75.8	76	...	8	...	Cir str.	
6.	E.	0	bc	...	29.850	79.8	76.0	81	81.7	4	...	Cm.&Str.	
8.	Calm.	0	bc	...	29.881	78.8	75.8	85	...	3	...	Cir str.	
10.	Calm.	0	bc	...	29.921	77.8	75.3	86	...	5	...	Cum.	
Midt.	Calm.	0	bc	...	29.923	76.8	73.8	84	...	2	...	Cum.	
Totals.	...	6	bc	...	106.12	108.0	60.9	966	...	79	...	Cir str.	Cum. & Str.
Mean.	E.S.E.	1		...	29.884	79.0	75.1	81	81.8	7	...	Cir str.	

## FRIDAY, 9TH.

2.	Calm.	0	bc	...	29.885	76.3	73.8	87	...	3	...	Cum.	At Amboina. Temperature by self-registering thermo- meter, max. 83° 7, min. 74° 0.
4.	Calm.	0	bc	...	29.866	75.8	73.8	89	...	4	...	Cum.	
6.	Calm.	0	bc	...	29.926	75.0	72.8	88	80.0	5	...	Cir cum.	
8.	S.S.E.	1	bc	...	29.926	78.8	75.8	85	...	8	...	Cir.	
10.	S.E.	1	bc	...	29.923	81.3	75.8	74	...	8	...	Cir.	
Noon.	S.E.	2	bc	...	29.901	82.8	75.8	68	...	6	...	Cum.	
2.	S.S.E.	3	bc	...	29.840	82.3	75.5	69	...	7	...	Cum.	
4.	S.S.E.	1	c	...	29.828	81.3	75.5	73	...	10	...	Cm.&Nb.	
6.	Variable.	0	bcp	...	29.855	77.8	75.8	89	...	8	...	Cm.&Nb.	
8.	E.N.E.	2	bc	...	29.904	76.3	73.8	87	...	8	...	Cum.	
10.	Calm.	0	bc	...	29.925	75.8	73.8	89	...	8	...	Cum.	
Midt.	Calm.	0	bc	...	29.915	75.8	73.8	89	...	9	...	Cum.	
Totals.	...	10	bcp	...	10694	99.3	56.0	987	...	84	...	Cir.	Cum. & Nimb.
Mean.	E.S.E.	1		...	29.891	78.3	74.7	82	80.0	7	...	Cir.	

## SATURDAY, 10TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.858	75.0	73.0	89	...	8	...	Cum str.	At Amboina.
4.	Calm.	0	bc	...	29.849	74.8	72.8	89	...	8	...	Cum str.	Temperature by self-registering thermometer, max. 86°, min. 74°.
6.	Calm.	0	bc	...	29.897	74.8	73.3	91	80.0	8	...	Cir.	
8.	Calm.	0	bc	...	29.919	76.0	74.3	91	...	8	...	Cum.&Str.	
10.	Calm.	0	bc	...	29.929	76.5	76.3	84	...	7	Cir cum.	Cum.	
Noon.	S.E.	1	bc	...	29.881	82.5	75.8	69	...	8	...	Cum.	4 p.m., left Amboina harbour.
2.	S.E.	2	bc	...	29.859	82.3	75.8	70	...	8	Cir.	Cum.	
4.	E.	1	bc	...	29.831	82.8	75.8	68	...	7	Cir.	Cum.	
6.	S.E.	1	bc	...	29.847	78.8	73.8	75	81.5	8	Cir str.	Cir cum.	
8.	N.E.	1	bc	...	29.875	78.8	73.8	75	81.5	5	...	Cum.&Cum.st	
10.	E.S.E.	2	bcl	...	29.891	79.3	74.5	76	81.5	3	...	Cum.	
Milt.	E.S.E.	3	bcm	...	29.869	79.5	74.5	75	81.7	5	...	Cum.	
Totals.	...	11	...	...	10505	104.1	53.7	952	6.2	83	Cir.	Cum., Str., & Cum str.	
Mean.	E.S.E.	1	...	...	29.875	78.7	74.5	79	81.2	7	...	...	

## SUNDAY, 11TH.

2.	S.E.	1	bc	...	29.845	78.8	74.8	80	81.7	6	Str.	Cum.	At noon, lat. 3° 16' S. long. 127° 21' E. Temperature by self-registering thermometer, max. 84°, min. 76° 52'.
4.	S.E.	2	bc	...	29.873	77.8	74.8	84	82.0	7	Str.	Cum.	
6.	E.S.E.	3	bc	...	29.871	79.8	74.8	75	82.0	8	Cir str.	Cir cum.	
8.	E.S.E.	2	bc	...	29.907	79.8	75.8	80	82.2	7	Cir cum.	...	
10.	S.E.	2	bc	...	29.908	81.8	76.3	74	82.2	4	Cir.	Cum.	Sp. gr. 1.02625. Several gannet seen. Lightning to S.W.
Noon.	S.S.E.	3	bc	...	29.877	82.3	76.3	72	82.2	3	Cir.	Cum.	
2.	S.S.E.	3	bc	...	29.831	81.8	75.3	70	83.0	3	Cir.	Cum.	
4.	S.S.E.	3	bc	...	29.806	82.3	76.3	72	83.5	4	...	Cum.&Str.	
6.	SbE.	4	bc	...	29.816	82.0	76.8	75	...	3	Cir str.	Cir.	
8.	SbE.	3	bc	...	29.857	81.8	75.8	72	82.0	1	...	Str.	
10.	swbw.	2	bcl	...	29.884	80.8	75.8	76	...	1	...	Str.	
Milt.	swbw.	2	bc	...	29.872	81.3	76.8	78	82.0	4	...	Cum.	
Totals.	...	30	...	...	10347	10.3	69.6	68	22.8	51	Cir. & Str.	Cum. & Str.	
Mean.	S.S.E.	3	...	...	29.862	80.9	75.8	76	82.3	4	...	...	

## MONDAY, 12TH.

2.	S.	2	bc	...	29.822	80.8	76.8	80	82.0	6	...	Cum.	At noon, lat. 1° 37' S. long. 127° 7' E. Temperature by self-registering thermometer, max. 84° 5, min. 80°. Current, S. 62 W. 15°.
4.	SbE.	3	bc	...	29.797	80.3	76.8	83	82.0	2	...	Cum.	
6.	S.S.E.	2	bc	...	29.897	80.8	76.5	79	82.0	3	Cir str.	Cum.	
8.	SbE.	2	bc	...	29.880	81.5	76.3	75	82.0	5	Cir str.	Cum.	
10.	SbE.	2	bc	...	29.886	82.3	76.8	74	82.2	4	...	Cum.	Black bulb in sun 132°. Sp. gr. 1.02580.
Noon.	SbE.	2	bc	...	29.852	83.8	77.8	72	82.7	4	Cir str.	Cir.	
2.	S.	1	bc	...	29.892	82.3	77.3	76	82.5	6	Cir.	Cum.	
4.	S.	1	bc	...	29.800	82.3	77.3	76	83.0	6	Cir.	Cum.st.	
6.	S.	0	bc	...	29.810	81.8	77.0	77	82.7	5	Cir str.	Str.	
8.	S.E.	1	bc	...	29.835	81.3	77.8	83	83.0	2	...	Cum.	
10.	SbS.	2	bcm	...	29.872	80.8	78.0	86	83.0	1	Cir str.	...	
Milt.	E.N.E.	3	bcl	...	29.862	81.8	77.8	80	83.0	2	...	Cum.	
Totals.	...	21	...	...	10085	19.8	86.2	941	30.1	46	Cir str.	Cum.	
Mean.	SSE	2	...	...	29.840	81.6	77.2	78	82.5	4	...	...	

## TUESDAY, 13TH OCTOBER 1874.

Hour	Wind.		Weather.	State of Sky, 6 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	E. N. E.	12	bcl	...	29.832	81.8	77.3	79	82.5	12	...	Cum.	At noon, lat. 0° 43' s. long. 126° 59' E. Temperature by self-registering thermo- meter, max. 84.7, min. 79.7. Current, s. 34 w. 9'.  Observed several porpoises and flying- fish. Sp. gr. 1.02580.
4.	S. N. E.	1	belt	...	29.822	81.8	76.8	76	...	3	...	Cum.	
6.	E.	1	belt	...	29.860	80.8	76.8	80	82.7	1	Str.	Cum. & Str.	
8.	S. E.	1	bcl	...	29.891	81.0	77.0	80	...	1	Str.	Cum.	
10.	E. S. E.	12	bcl	...	29.891	81.8	77.8	80	83.0	5	Cir.	Cum.	
Noon.	S. S. E.	3	bcl	...	29.856	82.8	77.8	76	83.0	6	Cir str.	Cum.	
2.	S. S. E.	3	bcl	...	29.808	83.0	76.3	77	83.2	4	Cir str.	Cum.	
4.	E. S. E.	3	belt	...	29.792	81.8	78.8	85	83.2	9	...	Cum. & Nb.	
6.	Calm.	0	bcl	...	29.828	81.3	77.8	83	...	5	Cir.	Cum. & Nb.	
8.	Calm.	0	help	...	29.847	82.0	77.8	79	83.0	6	Str.	Cum.	
10.	S. N. E.	2	help	...	29.883	78.3	75.8	86	83.0	9	...	Cum.	
Midd.	S.	1	help	...	29.863	78.3	75.8	87	83.0	8	Cir str.	Cum.	
Totals.	...	19	bclpt	...	1017.3	14.7	87.8	967	26.6	68	Cir str.	Cum. & Nimb.	
Mean.	E.	2		...	29.848	81.2	77.3	81	83.0	6			

## WEDNESDAY, 14TH.

2.	Variable.	4	epl	...	29.867	78.5	75.5	84	82.5	10	...	Cum.&Nb.	At noon, lat. 0° 45' S. long. 126° 55' E. Temperature by self-registering thermo- meter, max. 84.2, min. 76.5. Current, s. 27 w. 18. Sp. gr. 1.02546. 6 p.m., arrived and anchored off Ternate island.
4.	Variable.	1	belm	...	29.856	78.5	75.5	84	82.2	7	...	Cu & Cum. str.	
6.	S.	1	bel	...	29.880	79.5	76.5	85	...	8	...	Cum.	
8.	Calm.	0	be	...	29.911	81.3	78.3	85	82.7	4	Cir.	Cum.	
10.	Calm.	0	be	...	29.925	81.8	77.8	80	83.5	5	Cir.	Cum.	
Noon.	S.	1	be	...	29.880	83.8	79.3	78	85.5	6	Cir str.	Cum.	
2.	S.	1	be	...	29.838	82.8	78.8	80	84.0	8	Cir.	Cum.	
4.	E.	1	be	...	29.828	77.8	75.8	89	83.0	9	Cir.	Cum.	
6.	S. E.	3	bep	...	29.856	77.8	75.8	89	82.7	9	...	Cum.&Str.	
8.	Calm.	0	be	...	29.872	...	...	...	...	8	...	Cum.	
10.	Calm.	0	be	...	29.892	77.8	75.8	89	...	2	...	Cum.	
Midd.	Calm.	0	be	...	29.881	78.5	76.5	89	...	3	...	Cum.	
<hr/>													
Totals.		...	12	...	10466	168.1	75.6	52	26.1	79	Cir str.	Cum.	
Mean. Variable.		1	...	...	29.872	79.8	76.9	85	83.3	7			

## THURSDAY, 15TH.

2.	Calm.	0	be	...	29.865	77.8	75.8	89	...	3	...	Cum.	At Ternate. Temperature by self-registering thermo- meter, max. 85° 2' min. 76° 5.
4.	Calm.	0	be	...	29.843	77.8	75.8	89	...	2	...	Cum.	
6.	Calm.	0	be	...	29.863	78.0	76.3	90	82.8	1	Cir.	Cum.	
8.	gls.	1	be	...	29.879	80.3	77.0	84	...	2	Cir.	Cum.	
10.	S.E.	1	be	...	29.880	81.3	77.3	80	...	1	Cir.	Cum.	
Noon.	S.E.	1	be	...	29.822	82.3	79.3	85	...	2	...	Cum.	
2.	S.	2	be	...	29.779	83.3	77.3	72	...	6	Cir str.	Cum.	
4.	s.w.	3	be	...	29.761	84.5	77.8	69	...	4	Cir.	Cum.	
6.	s.w.	1	bep	...	29.795	81.8	78.8	85	83.0	3	Cir.	Cum.	
8.	Calm.	0	bep	...	29.841	79.3	77.0	89	...	7	...	Cum. & N.b.	
10.	Calm.	0	bel	...	29.876	78.8	76.8	90	...	2	...	Cum.	
Midd.	Calm.	0	be	...	29.881	78.3	76.3	89	...	2	...	Cum.	
Totals.				9	...	10676	3.5	85.5	1011	...	35	Cir str.	Cum.
				bepd	...								
Mean. Variable.				1	...	29.840	80.3	77.1	84	82.9	3		

## FRIDAY, 16TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.824	77.8	75.8	89	...	1	...	Cum.	At Ternate. Temperature by self-registering thermo- meter, max. 85°5, min. 75°7.
4.	Calm.	0	bc	...	29.810	77.5	75.5	89	...	6	...	Cum.	
6.	Calm.	0	bc	...	29.816	77.8	75.8	89	82.5	4	...	Cum.	
8.	...	...	...	...	...	82.3	77.8	78	...	...	...	...	
10.	Calm.	0	bc	...	29.838	81.8	78.3	82	...	3	Cir.	Cum.	
Noon.	Calm.	0	bc	...	29.786	83.8	77.5	71	...	5	Cir.	Cum.	
2.	S.S.E.	2	bc	...	29.817	83.8	78.8	76	...	4	Cir.	Cum.	
4.	S.S.W.	3	bc	...	29.819	83.3	78.3	76	...	4	Cir.	Cum.	
6.	S.W.	1	bc	...	29.840	82.5	79.3	84	83.7	5	...	Cum.	
8.	Calm.	0	bc	...	29.818	81.8	78.8	85	...	9	Cir.	Cum.	
10.	N.	1	bc	...	29.816	79.8	77.8	90	...	8	...	Cum.	
Midd.	N.	1	c	...	29.798	79.5	77.8	91	...	9	...	Cum.	
Totals.	...	8	bc	...	8982	11.7	91.5	1000	6.2	58	Cir.	Cum.	
Mean.	Variable.	1	...	...	29.817	81.0	77.6	83	83.1	5	...	...	

## SATURDAY, 17TH.

2.	N.	1	bc	...	29.778	78.8	76.8	90	...	5	...	Cum.	At noon, lat. 0° 48' N. long. 127° 18' E. Temperature by self-registering thermo- meter, max. 85°, min. 77°.
4.	Calm.	0	bc	...	29.772	78.3	76.3	89	...	7	...	Cum.	
6.	N.	1	bc	...	29.810	78.3	76.3	89	83.2	7	...	Cum.	
8.	S.E.	1	bcp	...	29.851	79.3	73.8	73	...	5	...	Cum.	
10.	E.	1	bc	...	29.861	82.3	78.8	82	...	5	Cir.	Cum.	
Noon.	S.S.W.	1	bc	...	29.812	80.8	76.8	80	...	6	Cir.	Cum.	
2.	Calm.	0	c	...	29.796	82.0	77.8	79	83.7	10	...	Cm.&Nb.	
4.	Variable.	3	or	...	29.771	78.3	76.0	87	83.7	10	...	Cm.&Cmst	
6.	E.S.E.	1	c	...	29.806	79.0	76.5	88	82.5	9	...	Cm.&Str.	
8.	S.E.	1	bcl	...	29.834	79.8	77.3	88	83.0	8	Cir.	Cm.&Str.	
10.	S.E.	1	bcl	...	29.860	80.8	77.3	83	82.5	5	...	Cum.	
Midd.	Calm.	0	bcl	...	29.821	79.8	76.3	83	82.7	8	...	Cm.&Nb.	
Totals.	...	11	bcp	...	9772	117.5	80.0	51	21.3	85	Cir.	Cum., Str., & Nimb.	
Mean.	Variable.	1	...	...	29.814	79.8	76.7	84	83.0	7	...	...	

## SUNDAY, 18TH.

2.	S.W.	1	bclm	...	29.790	79.3	75.8	83	82.7	8	...	Cum.	At noon, lat. 1° 1' N. long. 126° 20' E. Temperature by self-registering thermo- meter, max. 86°5, min. 78°0. Current, N. 4'. Black bulb in sun 142°. Observed a water-spout. 3.45 P.M., heavy rain squall. 4.45 P.M., rain and wind squall. Sp. gr. 1.02531.
4.	Calm.	0	bcm	...	29.789	79.3	76.0	84	83.0	1	...	Cum.	
6.	S.	1	bc	...	29.827	79.8	76.8	85	...	4	Cir.	Cum.	
8.	S.E.	0	bc	...	29.863	81.5	77.8	81	83.2	3	Cir.	Cum.	
10.	N.E.	1	bc	...	29.859	82.8	78.0	77	84.0	5	Cir.	Cum.	
Noon.	N.E.	0	bc	...	29.842	84.0	78.8	75	84.7	8	Cir.	Cum.	
2.	N.E.	1	bc	...	29.787	85.5	79.8	73	84.0	6	Cir.	Cum.	
4.	E.S.E.	0	bc	...	29.795	84.8	79.3	74	84.0	6	Cir.	Cum.	
6.	N.E.	5	crq	...	29.822	78.3	75.5	85	82.7	10	...	Cm.&Nb.	
8.	N.E.	2	bc	...	29.837	78.3	75.3	84	82.2	8	...	Cum.	
10.	N.E.	2	bcl	...	29.854	79.8	76.8	85	83.0	6	Cir cum.	Cum.	
Midd.	S.E.	1	bcl	...	29.830	80.0	77.8	89	83.0	8	Cir cum.	Cum.	
Totals.	...	14	bcpbm	...	9895	13.4	87.7	15	36.5	73	Cir. & Cir cum.	Cum.	
Mean.	Variable.	1	...	...	29.825	81.1	77.3	81	83.3	6	...	...	

## MONDAY, 19TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E.	1	cl	...	29.801	80.3	76.8	83	83.0	9	...	Cum.	At noon, lat. 2° 1' S. long. 125° 22' E. Temperature by self-registering thermo- meter, max. 85°, min. 77° 5.
4.	E.S.E.	12	cl	...	29.802	80.8	76.8	80	83.0	8	...	Cum.	
6.	N.E.	3	cl	...	29.821	80.8	76.8	80	83.0	9	...	Cum.&Cm	Current, S. 36° W. 4'. Black bulb in sun 140°.
8.	N.E.	12	be	...	29.876	80.8	76.3	78	83.0	9	...	Cum.&Cm	
10.	S.E.	12	be	...	29.884	82.3	76.3	72	83.0	8	Cir.	Cum.&Cm	Sp. gr. 1.02594.
Noon.	S.E.	1	be	...	29.859	83.5	76.8	69	83.0	9	Cir.	Cum.&Cm	
2.	E.S.E.	12	be	...	29.810	83.8	77.5	71	83.0	8	...	Cum.	Clouds from southward.
4.	E.S.E.	1	be	...	29.787	84.3	77.3	68	83.2	3	Cir str.	Cum.	
6.	S.E.	2	be	...	29.807	82.8	76.8	72	83.0	6	Cir str.	Cum.	Clouds from southward.
8.	N.E.	3	be	...	29.844	80.5	77.5	85	83.0	9	...	Cum.&Cm	
10.	E.N.E.	2	bel	...	29.876	80.8	77.3	82	83.0	5	Cir.	Cum.	
Midd.	N.E.	1	be	...	29.852	80.8	76.8	80	83.0	7	Cir.	Cum.	
Totals.	...	22	...	...	10019	21.5	83.0	920	2	90	Cir cum., Cum., & Cum str.		
Mean.	E.N.	2	...	...	29.835	81.8	76.9	77	83.0	7	Cir str.		

## TUESDAY, 20TH.

2.	N.E.	3	bel	...	29.809	81.3	77.5	81	83.0	5	...	Cum.&Nb	At noon, lat. 2° 55' S. long. 124° 53' E. Temperature by self-registering thermo- meter, max. 86°, min. 75°.
4.	N.E.	5	eqrlt	...	29.814	77.3	75.3	89	82.2	10	...	Cum.&Nb	
6.	S.E.	3	olt	...	29.820	78.8	76.8	90	83.0	10	...	Cum str.	Current, S. 68° W. 16'. 3 A.M., heavy rain squall. Black bulb 138°.
8.	S.E.	2	be	...	29.843	79.8	76.8	85	83.0	8	Cir.	Cum.	
10.	E.S.E.	2	be	...	29.895	80.8	76.8	80	83.0	9	...	Cum.&Cm	Sp. gr. 1.02562.
Noon.	E.	1	be	...	29.868	83.8	78.5	75	83.0	5	Cir cum.	Cum.	
2.	Calm.	0	be	...	29.819	84.3	78.3	72	85.0	4	Cir.	Cum.&Str.	
4.	Calm.	0	be	...	29.799	84.3	78.3	72	86.0	2	Cir.	Cum.	
6.	E.	1	be	...	29.789	83.5	77.8	73	85.5	3	Cir.	Cum.	
8.	S.	1	be	...	29.817	81.8	76.8	76	84.0	4	Cir str.	Cum.	
10.	N.E.	1	be	...	29.852	80.8	77.5	84	83.5	1	...	Cum.	
Midd.	Calm.	0	bel	...	29.833	80.3	77.0	84	83.2	1	...	Cum.	
Totals.	...	19	...	...	9958	16.8	87.4	1	14.4	62	Cir str.	Cum., Str., & Nimb.	
Mean.	E.N.	2	...	...	29.830	81.4	77.3	80	83.7	5	Cir str.		

## WEDNESDAY 21st.

2.	Calm.	0	be	...	29.812	80.3	76.8	83	83.0	1	...	Cum.	At noon, lat. 4° 14' S. long. 124° 18' E. Temperature by self-registering thermo- meter, max. 86° 5, min. 79° 2.
4.	Calm.	0	be	...	29.773	80.3	76.8	83	83.0	3	...	Cum.	
6.	Calm.	0	be	...	29.791	80.3	76.8	83	83.0	3	...	Cum.&Cm	Current, S. 64° W. 4'. Black bulb in sun 142°.
8.	N.E.	1	be	...	29.841	82.3	77.0	75	83.0	5	...	Cum.	
10.	N.W.	1	be	...	29.855	83.8	77.8	72	84.7	3	...	Cum.	Boatswain birds, tern, and swallow seen. Sp. gr. 1.02577.
Noon.	Calm.	0	be	...	29.817	83.8	78.8	76	88.0	3	...	Cir cum.	
2.	W.S.W.	1	be	...	29.766	85.3	78.8	70	85.7	4	Cir str.	Cum.	
4.	W.S.	2	be	...	29.744	84.8	78.3	70	85.7	3	Cir str.	Cum.	
6.	W.	1	be	...	29.765	84.8	78.8	72	83.5	3	Cir.	Cum.&Str.	
8.	W.S.W.	1	be	...	29.809	82.0	78.5	82	83.2	5	...	Cum.&Str.	
10.	W.S.W.	1	be	...	29.827	81.8	78.8	85	83.2	7	Cir.	Cum.&Nb	
Midd.	S.	3	cup	...	29.839	78.3	76.8	91	83.0	8	...	Cum.	
Totals.	...	11	...	...	9639	27.8	94.0	942	49.0	48	Cir str.	Cum., Str., & Nimb.	
Mean.	Variable.	1	...	...	29.803	82.3	77.8	78	84.1	4	Cir str.		

THURSDAY, 22<sup>d</sup> OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sbg.	1	oc	...	29.795	78.8	74.8	80	83.0	9	...	Cum&Cust	At noon, lat. 5° 47' N. long. 123° 33' E. Temperature by self-registering thermo- meter, max. 85° 5', min. 77° 0'.
4.	Calm.	0	ocm	...	29.777	79.8	77.0	86	83.0	9	...	Cum str.	
6.	S.E.	1	bc	...	29.796	79.8	77.8	85	83.0	6	...	Cum.	
8.	E.	1	bc	...	29.845	80.0	77.5	88	...	7	...	Cum&Nlb.	Black bulb 137°. Sp. gr. 1.02525.
10.	E.	0	bc	...	29.865	82.8	78.8	80	83.5	8	...	Cir str.	
Noon.	W. N.W.	2	bep	...	29.845	79.8	75.8	80	83.0	10	...	Cum&Nlb.	
2.	S.S.E.	1	bc	...	29.792	83.8	78.8	76	84.7	4	...	Cir str.	
4.	S.S.E.	1	bc	...	29.774	85.0	79.8	75	85.0	5	...	Cir str.	
6.	swbw.	2	bc	...	29.791	82.5	77.5	76	84.7	4	...	Cir.	
8.	W.S.W.	1	bc	...	29.817	82.3	77.3	76	84.0	2	...	Cum.	
10.	Calm.	0	bc	...	29.867	82.3	77.5	77	84.0	5	...	Cir cum.	
Midt.	E.S.E.	1	bc	...	29.856	82.8	77.8	76	84.0	3	...	Cum.	
Totals.	...	11	bep	...	9820	19.7	89.4	115	41.9	72	...	Cir str.	Cum. & Nimb.
Mean.	Variable.	1		...	29.818	81.6	77.4	79	83.8	6	...		

FRIDAY, 23<sup>d</sup>.

2.	Variable.	1	bc	...	29.831	81.8	77.3	78	84.0	3	...	Cir.	At noon, lat. 6° 48' N. long. 122° 25' E. Temperature by self-registering thermo- meter, max. 88°, min. 80° 2'.
4.	Calm.	0	bc	...	29.897	81.8	76.8	76	84.0	3	...	Cir.	
6.	Calm.	0	bc	...	29.815	80.8	77.8	85	84.0	5	...	Cum.	
8.	Calm.	0	bc	...	29.867	84.5	80.9	78	84.0	5	...	Cum.	Sp. gr. 1.02556.  9 A.M., anchored at Sanboangan.
10.	Calm.	0	bc	...	29.904	86.0	80.3	73	84.5	5	...	Cum.	
Noon.	Calm.	0	bc	...	29.874	87.3	81.0	72	85.5	6	...	Cir.	
2.	Variable.	1	bc	...	29.819	87.3	80.3	69	86.0	6	...	Cir.	
4.	Calm.	0	bc	...	29.801	86.8	80.5	72	85.5	5	...	Cir.	
6.	N.W.	2	bc	...	29.813	84.8	79.8	76	...	5	...	Cir str.	
8.	N.N.W.	1	bc	...	29.859	83.3	78.5	77	81.5	6	...	Cum&Cm	
10.	N.	1	bc	...	29.898	80.3	76.3	80	...	2	...	Cum.	
Midt.	N.	1	bc	...	29.897	79.3	76.3	85	...	1	...	Cir str.	
Totals.	...	7	bc	...	10185	44.0	104.9	81	39.0	52	...	Cir str.	Cum.
Mean.	Variable.	1		...	29.849	83.7	78.7	77	84.3	4	...		

SATURDAY, 24<sup>th</sup>.

2.	N.N.E.	2	bc	...	29.890	78.0	74.3	80	...	8	...	Cir str.	At Sanboangan. Temperature by self-registering thermo- meter, max. 84° 7', min. 76° 5'.
4.	N.N.E.	1	bc	...	29.843	77.8	73.8	79	...	5	...	Cir str.	
6.	N.N.E.	1	bc	...	29.859	76.8	73.3	81	80.7	5	...	Cir str.	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	Wbs.	2	bc	...	29.895	83.8	78.8	76	...	2	...	Cum.	
Noon.	W.	1	bc	...	29.866	84.8	79.3	74	...	4	...	Cum&Nlb.	
2.	W.	2	bc	...	29.807	83.3	78.3	76	...	4	...	Cum.	
4.	S.W.	1	bc	...	29.801	82.3	77.3	76	...	4	...	Cum.	
6.	S.W.	2	bc	...	29.812	81.8	77.3	78	81.2	6	...	Cum&Str.	
8.	Calm.	0	bc	...	29.861	80.8	77.8	85	...	6	...	Cum&Str.	
10.	S.W.	1	bc	...	29.896	78.8	75.8	85	...	7	...	Cum&Cm	Cum&Cst.
Midt.	N.	1	bc	...	29.895	78.8	75.3	83	...	7	...		
Totals.	...	14	bc	...	9414	7.0	71.3	103	1.9	58	...	Cir str.	Cum. & Str.
Mean.	Variable.	1		...	29.856	80.6	76.5	79	81.0	5	...		

## SUNDAY, 25TH OCTOBER 1871.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer 100 feet to 29" and Sea Level.	Thermometer.		Humidity. Sat. 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S. E.	1	bey	...	29.853	75.8	72.8	84	...	9	Cir.	Cm.&Nb.	At Sanboangan.
4.	E.	1	be	...	29.828	75.3	72.8	87	...	9	...	Cm.&Nb.	Temperature by self-registering thermo-
6.	N.	1	be	...	29.856	74.0	71.5	87	89.5	6	Cir.	Cm.&Str.	meter, max. 85° 7, min. 72° 5.
8.	N. E.	2	be	...	29.877	77.8	74.8	84	...	4	Cir.	Cm.&Str.	
10.	E. S. E.	1	be	...	29.903	80.8	76.3	78	...	5	Cir.	Cm.&Str.	
Noon.	E. S. E.	2	be	...	29.862	82.8	76.0	69	...	4	Cir.	Cum.	
2.	S. E.	1	be	...	29.811	83.0	76.8	71	...	4	Cir str.	Cum.	
4.	S. S. W.	2	be	...	29.786	83.5	77.8	73	...	3	Cir.	Cum.	
6.	N.	1	be	...	29.813	80.8	77.3	83	81.5	6	Cir str.	Cum.	
8.	W.	2	be	...	29.861	79.8	77.5	89	...	5	Cir cum	Cm.&Str.	
10.	W.	1	be	...	29.891	80.8	77.8	85	...	8	...	Cm.&Str.	
Midt.	W.	1	be	...	29.882	79.8	76.8	85	...	8	...	Cm.&Str.	
Totals.	...	16	bey	...	10203	114.2	68.2	15	...	71	Cir str.	Cum., Str., & Nimb.	
Mean. Variable.	1			...	29.850	79.5	75.7	81	81.0	6			

## MONDAY, 26TH.

2.	W.	3	be	...	29.835	79.8	76.8	85	...	9	...	C. C. & N.	At noon, lat. 7° 2' N. long. 121° 47' E.
4.	Calm.	0	be	...	29.824	77.8	75.8	89	...	7	...	C. C. & N.	Temperature by self-registering thermo-
6.	Calm.	0	be	...	29.856	77.8	74.8	84	81.5	8	Str.	Cum.	meter, max. 83°, min. 77°.
8.	swbs.	1	be	...	29.881	78.8	75.8	85	...	7	Cir cum.	Cm.&Cmst.	6 P.M., left Sanboangan.
10.	Calm.	0	be	...	29.890	81.3	78.0	84	82.5	8	...	Cm.&Cmst.	
Noon.	swbw.	2	e	...	29.881	81.3	77.8	83	83.0	10	...	Cm.&Nb.	
2.	W. S. W.	2	bep	...	29.831	81.8	78.8	85	83.5	7	Cir.	Cum.	Sp. gr. 1.02536.
4.	swbw.	2	bep	...	29.811	81.8	77.8	80	84.0	7	Cir.	Cum.	
6.	Variable.	3	bep	...	29.819	79.5	77.0	87	83.5	8	...	Cum.	
8.	N.E.	1	be	...	29.833	80.3	76.8	83	83.0	8	...	Cum.	11 P.M., heavy rain squall.
10.	N. E.	1	e	...	29.865	79.8	77.8	90	83.0	10	...	Cm.&Nb.	
Midt.	N. S. E.	3	ep	...	29.858	78.8	76.8	90	83.0	10	...	Cm.&Nb.	
Totals.	...	18	bep	...	10214	118.8	84.0	65	27.0	99	Cir.	Cum. & Nimb.	
Mean. swbs.	1			...	29.851	79.9	77.0	85	83.0	8			

## TUESDAY, 27TH.

2.	Variable.	2	ep	...	29.841	79.8	77.8	96	83.0	10	...	Cm.&Nb.	At noon, lat. 8° 32' N. long. 121° 55' E.
4.	Variable.	1	bep	...	29.833	79.8	77.8	90	83.0	5	...	Cm.&Nb.	Temperature by self-registering thermo-
6.	N. E.	3	be	...	29.823	79.3	77.5	91	82.7	7	Cir.	Cum.	meter, max. 86°, min. 77°.
8.	N. E.	1	be	...	29.846	80.8	78.3	88	83.0	4	Cir.	Cum.	Current, S. 31° E. 6'.
10.	Calm.	0	be	...	29.877	83.3	79.8	83	83.5	4	Cir.	Cum.	Black bulb in sun 140°.
Noon.	S.	1	be	...	29.844	83.8	79.3	78	84.0	6	Cir.	C. C. & N.	Sp. gr. 1.02506.
2.	N. S. E.	1	be	...	29.808	82.5	78.0	78	83.5	8	Cir.	Cum.	
4.	N. W.	2	be	...	29.758	82.5	78.3	79	83.5	6	Cir.	Cum str.	
6.	N. W.	1	be	...	29.793	81.8	76.5	75	83.5	4	Cir str.	Cum.	
8.	N. S. W.	1	bcl	...	29.841	80.8	78.5	89	83.7	5	...	Cm.&Nb.	
10.	N. E.	2	eppl	...	29.846	79.3	76.3	85	83.5	9	...	Cm.&Nb.	
Midt.	N. E.	1	be	...	29.853	79.8	77.3	87	83.5	8	Cir cum.	Cum.	
Totals.	...	16	beppl	...	9963	13.5	95.4	1013	49.4	76	Cir.	Cum. & Nimb.	
Mean. Variable.	1			...	29.830	81.1	77.9	84	83.4	6			

WEDNESDAY, 28TH OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.				Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	N <sup>by</sup> E.	1	bc	...	29.810	79.8	77.0	86	83.5	8	Cir cum.	Cum. & Cumst	At noon, lat. 10° 23' N. long. 122° 20' E.
4.	N <sup>by</sup> E.	1	clp	...	29.804	80.3	77.8	88	83.5	9	...	Cum. & Cumst	
6.	N. N. E.	2	bc	...	29.822	79.8	77.8	90	82.5	7	...	Cum.	
8.	N. N. E.	2	bc	...	29.858	81.8	78.8	85	83.5	6	Cir.	Cum.	
10.	N <sup>by</sup> N.	2	bc	...	29.863	82.3	77.8	78	83.7	5	...	Cum.	Black bulb 135°. Sp. gr. 1.02464. 5 P.M., anchored at 110 fms.
Noon.	Calm.	0	bc	...	29.831	82.3	78.3	80	85.0	3	...	Cum.	
2.	N. W.	1	bc	...	29.807	83.3	79.3	80	85.0	4	...	Cum.	
4.	Calm.	0	bc	...	29.783	82.8	78.3	78	84.5	7	...	Cum.	
6.	N. N. E.	1	...	...	29.792	81.3	78.3	85	84.0	...	...	...	
8.	Calm.	0	bcp	...	29.822	80.8	78.8	90	...	9	...	Cum.	
10.	Calm.	0	bc	...	29.836	79.8	78.0	90	...	5	...	Cum.	
Midt.	Calm.	0	bc	...	29.837	78.8	77.8	95	...	2	Cir cum.	...	
Totals.	...	10	...	...	9866	973.1	98.0	1025	35.2	65	Cir cum.	Cum. & Cum str.	
Mean.	N <sup>by</sup> E.	1	bcp	...	29.822	81.1	78.2	85	83.9	6			

THURSDAY, 29TH.

2.	N. W.	1	bc	...	29.818	78.8	77.8	95	...	5	...	Cum.	At 110 fms.
4.	Calm.	0	bc	...	29.804	79.3	77.3	90	...	2	...	Cum.	
6.	Calm.	0	bc	...	29.815	77.8	76.5	93	83.5	5	Cir.	Cum. & Str.	
8.	Calm.	0	bc	...	29.846	79.8	78.3	93	...	4	Cir.	Cum.	
10.	S. W.	1	bc	...	29.861	80.8	77.3	82	...	3	Cir.	Cum.	
Noon.	S. W.	2	bc	...	29.827	82.8	77.8	76	...	3	Cir str.	Cum.	
2.	S. W.	1	bc	...	29.763	85.3	78.8	70	...	2	...	Cum.	
4.	S. S. W.	2	bc	...	29.753	84.8	78.8	72	...	4	Cir str.	Cum.	
6.	S. S. W.	1	bc	...	29.769	82.8	77.3	74	83.5	5	...	Cum.	
8.	S. S. W.	1	bc	...	29.805	81.8	77.5	79	...	...	...	Cum.	
10.	S. S. W.	1	bcl	...	29.833	80.8	77.3	82	...	1	Cir str.	Cum.	
Midt.	S.	2	bc	...	29.828	79.8	76.8	85	...	2	Cir str.	Cum.	
Totals.	...	12	...	...	9722	14.6	91.5	991	...	36	Cir str.	Cum.	
Mean.	sw ½ S.	1	...	...	29.810	81.2	77.6	83	83.5	3			

FRIDAY, 30TH.

2.	Calm.	0	bc	...	29.813	77.8	76.3	91	...	4	Cir str.	Cum.	At 110 fms. Temperature by self-registering thermo- meter, max. 85° 5, min. 77° 0.
4.	Calm.	0	bcm	...	29.799	...	...	...	...	8	Cir str.	...	
6.	Calm.	0	bc	...	29.819	78.8	76.3	87	83.0	3	Str.	Cum.	
8.	Calm.	0	bc	...	29.857	80.5	77.8	86	...	3	Cir.	Cum. & Str.	
10.	S. W.	1	bc	...	29.872	81.8	77.5	79	...	3	Cir cum.	Cum.	
Noon.	S. W.	2	bc	...	29.840	82.8	76.8	72	...	3	Cir cum.	Cum.	
2.	S. W.	1	bc	...	29.773	84.5	78.3	71	...	4	Cir str.	Cum.	
4.	S. W.	2	bc	...	29.771	84.5	77.8	69	...	5	Cir str.	Cum.	
6.	S. W.	1	bc	...	29.805	82.8	77.8	76	83.5	5	Cir str.	Cum.	
8.	S. W.	1	bcl	...	29.869	81.3	76.8	78	...	1	...	Cum.	
10.	N.	2	bcl	...	29.883	79.8	76.3	82	...	4	...	Cum.	
Midt.	N.	1	bcl	...	29.870	78.8	75.5	84	...	2	Cir.	Cum. & Str.	
Totals.	...	11	...	...	9971	13.4	77.2	875	...	45	Cir str.	Cum. & Str.	
Mean.	wbs.	1	...	...	29.831	81.2	77.0	79	83.2	4			

## SATURDAY, 31ST OCTOBER 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	be	...	29.843	78.8	75.8	85	...	3	Cir.	Cum.	At noon, lat. 10° 54' N. long. 122° 52' E. Temperature by self-registering thermometer, max. 86°, min. 77° 2. 6 A.M., left Ho Ho for Manila.
4.	N.E.	1	be	...	29.826	77.8	75.8	89	...	4	Cir str.	Cum.	
6.	Calm.	0	be	...	...	78.8	75.8	83	83.0	5	Cir.	Cum.	
8.	Calm.	0	be	...	29.896	79.8	78.8	95	83.5	6	Cir.&Cir.st.	...	
10.	Calm.	0	be	...	29.900	81.3	78.8	88	84.0	5	...	Cir.&Str.	11.30 P.M. to midnight, vivid sheet lightning, with heavy rain and thunder.
Noon.	N.W.	1	be	...	29.869	82.3	76.8	74	85.5	4	...	Cum.	
2.	N.E.	1	be	...	29.790	84.8	78.5	71	84.0	3	Cir str.	Cum.	
4.	N.E.	2	be	...	29.796	85.3	78.5	69	84.0	5	Cir.	Cum.	
6.	N.E.	1	be	...	29.839	83.8	78.5	75	85.0	4	Cir.	Cum.	
8.	Calm.	0	be	...	29.873	82.8	78.8	80	...	4	...	Cum.	
10.	Variable.	3	be & squall	...	29.883	81.3	77.8	82	...	8	...	Cir.&Nb.	
Midt.	W.S.W.	1	be & squall	...	29.893	77.3	75.3	89	84.2	10	...	Nimb.	
Totals.	...	10	be & squall	...	9408	14.1	89.2	22	33.2	57	Cir. & Cir str.	Cum. & Nimb.	
Mean.	Variable.	1		...	29.855	81.2	77.4	82	84.1	5			

## SUNDAY, 1ST NOVEMBER.

2.	N.	1	ocl	...	29.868	77.5	75.3	88	...	10	...	Cum.	At noon, lat. 11° 33' N. long. 123° 18' E. Temperature by self-registering thermometer, max. 82.5, min. 75.5.
4.	S.W.	1	e	...	29.857	77.8	75.5	88	...	10	...	Cum.	
6.	Variable.	0	er	...	29.895	76.8	75.8	94	...	10	...	Cum.	
8.	W.	1	be	...	29.924	78.3	76.0	88	...	9	...	Cum.	
10.	Calm.	0	be	...	29.927	79.8	76.8	85	...	6	Cir.&Cir.st.	Nimb.	Sp. gr. 1.02467.
Noon.	N.	1	be	...	29.885	80.8	77.8	85	85.0	8	Cir.&Cir.st.	Nimb.	
2.	Calm.	0	be	...	29.812	81.3	77.3	80	84.0	5	...	Cum.	
4.	N.	1	be	...	29.810	81.8	77.3	78	84.2	8	...	Cir.&Str.	
6.	N.	1	ed	...	29.854	81.8	77.5	79	84.0	10	...	Cir.&Str.	
8.	N.N.E.	2	od	...	29.868	79.8	76.8	85	83.7	10	...	Cir.&Str.	
10.	N.N.E.	3	od	...	29.884	80.8	78.8	90	83.7	10	...	Cir.&Str.	
Midt.	N.N.E.	2	od	...	29.874	80.3	77.8	88	83.7	8	...	Cum.	
Totals.	...	13	bed	...	10458	116.8	82.7	1028	28.3	104	Cir. & Cir cum.	Cum., Str., & Nimb.	
Mean.	N.S.W.	1		...	29.871	79.7	76.9	86	84.0	9			

## MONDAY, 2d.

2.	N.E.	2	bel	...	29.870	81.3	77.8	83	84.0	8	Str.	Cum.	At noon, lat. 12° 33' N. long. 122° 12' E. Temperature by self-registering thermometer, max. 85.5, min. 79.
4.	E.N.E.	3	be	...	29.873	80.8	75.8	76	84.0	8	Cir cum.	Cum.	
6.	E.N.	2	be	...	29.887	80.8	74.8	72	84.0	3	Cir str.	Cum.	
8.	N.E.	2	be	...	29.925	81.8	76.8	76	84.0	6	Cir str.	Cum.	
10.	N.E.N.	2	be	...	29.922	82.5	77.3	75	84.0	5	Cir str.	Cum.	Sp. gr. 1.02540. 7.30 P.M., heavy rain squall from N.N.E.
Noon.	N.N.E.	3	be	...	29.923	82.3	77.8	78	83.7	6	...	Cum.	
2.	N.	3	be	...	29.836	83.8	78.5	75	...	5	Cir.	Cum.	
4.	N.	2	be	...	29.831	84.8	78.8	72	84.0	5	Cir.	Cum.	
6.	N.	2	be	...	29.843	83.8	78.8	76	83.5	4	Str.	Cum.	
8.	N.	1	be & squall	...	29.881	...	...	...	83.0	8	Str.	Cum.	
10.	N.E.	4	bel	...	29.893	81.3	77.8	83	83.0	3	...	Cum.	
Midt.	N.E.	3	bel	...	29.897	80.5	77.8	86	83.0	6	...	Cum.	
Totals.	...	30	be & squall	...	10551	23.7	82.0	852	40.2	67	Cir str.	Cum.	
Mean.	N.N.E.	2		...	29.882	82.2	77.5	77	83.6	6			

TUESDAY, 3d NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer, at Sea Level, and Sea Level.	Thermometer.			Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	N.N.E.	3	bc	...	...	...	...	...	...	...	3	...	Cum.	At noon, lat. 13° 32' N. long. 121° 14' E. Temperature by self-registering thermo- meter, max. 85°, min. 79°.
4.	N.N.E.	2	bc	...	29.856	80.8	77.8	85	83.7	3	...	...	Cum.	
6.	N.E.	3	bc	...	29.883	79.8	77.8	90	...	3	...	...	Cum.	
8.	N.E.	1	bc	...	29.927	81.5	78.0	83	83.5	5	...	...	Cum.	
10.	N.E.	2	bc	...	29.953	81.8	78.0	81	83.0	3	...	...	Cum.	
Noon.	Variable.	1	bc	...	29.916	84.8	80.5	79	83.0	4	Cir str.	...	Cum.	
2.	E.S.E.	3	bcp	...	29.857	84.8	78.8	72	83.0	3	Cir str.	...	Cum.	
4.	E.S.E.	2	bc	...	29.859	84.7	78.3	70	82.7	8	...	...	Cum.	
6.	E.	4	bcp	...	29.874	81.3	76.8	76	82.7	7	Cir cum.	Cum. & Nb.	Cum.	
8.	N.E.	3	bcp	...	29.917	81.3	76.8	78	...	8	...	...	Cum.	
10.	N.E.	3	bc	...	29.938	81.3	77.3	80	82.7	5	...	...	Cum. & Str.	Sp. gr. 1.02521.
Midt.	E.N.E.	2	bcm	...	29.922	80.5	76.8	82	83.0	4	...	...	Cum. & Str.	
Totals.	...	29	...	...	9896	23.1	86.9	876	27.3	56	...	...	Cum., Str., & Niub.	
Mean.	N.E.	2	bcpm	...	29.899	82.1	77.9	79	83.0	5	...	...	Cir str.	

WEDNESDAY, 4th.

2.	E.N.E.	3	bcm	...	29.881	80.8	76.5	79	83.0	1	...	Cum.&Str.	At noon, lat. 14° 30' N. long. 120° 44' E. Temperature by self-registering thermo- meter, max. 85° 2, min. 79° 0.
4.	N <sup>by</sup> E.	2	bc	...	29.875	80.5	75.0	73	82.7	2	...	Cum.	
6.	N <sup>by</sup> E.	1	bc	...	29.868	80.3	74.8	73	83.0	4	Cir str.	Cum.&Cum	
8.	N <sup>by</sup> E.N.	4	bc	...	29.938	80.3	75.3	75	82.5	7	Cir str.	Cum.	
10.	N <sup>by</sup> E.N.	2	bc	...	29.948	81.3	75.8	74	83.2	7	Cir str.	Cum.	
Noon.	N.E.	4	e	...	29.940	82.3	76.8	74	...	10	...	Cum.	
2.	N.E.	2	bcp	...	29.876	80.8	76.8	80	...	4	Cir str.	Cum.&Nb.	
4.	Calm.	0	bc	...	29.870	83.8	78.8	76	...	7	Cir str.	Cum str.	
6.	Calm.	0	bc	...	29.887	81.8	76.8	76	82.7	6	Cir str.	Cum.	
8.	E.N.E.	2	bc	...	29.918	80.8	75.8	76	...	6	...	Cum.&Cum str	
10.	E.N.E.	1	bc	...	29.929	80.3	75.3	75	...	4	...	Cum.	
Midt.	N.N.E.	2	bcp	...	29.937	78.8	74.8	80	...	8	...	Cum.	
Totals.	..	23	bcp	...	10897	11.8	72.5	71	17.1	66	...	Cum., Str., & Cum str.	
Mean.	N.E.	2		...	29.908	81.0	76.0	76	82.8	5			

THURSDAY, 5th.

2.	N.N.E.	1	bcp	...	29.916	78.3	74.5	80	...	8	...	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 85° 5', min. 75° 5'.
4.	N.N.E.	1	bc	...	29.885	77.5	73.8	81	...	4	Cir cum.	Cum.&Str.	
6.	N'E.	2	bc	...	29.904	76.5	73.3	83	82.5	4	Cir str.	Cum.	
8.	N'E.	1	bc	...	29.939	80.0	74.8	74	...	1	Cir str.	...	
10.	Calm.	0	bc	...	29.942	81.8	76.8	76	...	2	Cir.	Cum.	
Noon.	N'E.	2	bc	...	29.899	81.8	75.8	72	...	4	...	Cum.	
2.	N.N.E.	1	bc	...	29.886	83.8	77.3	70	...	4	Cir.	Cum.	
4.	N.N.E.	2	bc	...	29.840	83.8	76.3	66	...	4	Cir.	Cum.	
6.	N.N.E.	2	bc	...	29.845	80.8	73.8	68	82.7	3	Cir str.	...	
8.	N.N.E.	1	bc	...	29.905	79.8	73.8	71	...	2	...	Cum.	
10.	Calm.	0	bun	...	29.906	79.8	73.8	71	...	0	...	...	
Midt.	Calm.	0	bun	...	29.896	78.8	73.8	75	...	0	...	...	
Totals.	...	13	...	...	10763	2.7	57.8	887	...	36	...	...	
Mean.	N.N.E.	1	bcpm	...	29.897	80.2	74.8	74	82.6	3	Cir str.	Cum.	

## FRIDAY, 6TH NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	29.872	78.8	73.8	75	...	0	...	...	At Manila. Temperature by self-registering thermo- meter, max. 81°, min. 75° 2.
4.	Calm.	0	be	...	29.874	77.8	73.3	77	...	0	...	...	
6.	Calm.	0	be	...	29.871	76.5	73.5	84	82.0	6	...	Cir. cum & St.	
8.	Calm.	0	be	...	29.915	79.3	74.8	78	...	2	...	Cir.	
10.	Calm.	0	be	...	29.917	80.3	76.3	80	...	4	...	Cum.	
Noon.	S.	1	bcp	...	29.882	79.5	76.8	86	...	8	...	Cir & Cum str.	
2.	Calm.	0	cp	...	29.839	79.3	76.3	85	...	10	...	Cum. & Cum str.	
4.	Calm.	0	cyp	...	29.839	78.8	75.8	85	...	9	...	Cum & Cum str.	
6.	Calm.	0	be	...	29.837	78.8	75.8	85	82.5	8	...	Cum & Cum str.	
8.	Calm.	0	bcm	...	29.879	78.5	76.3	88	...	8	...	Cum & Cum str.	
10.	Calm.	0	bcm	...	29.887	77.8	74.8	84	...	4	...	Str.	
Midt.	Calm.	0	bcm	...	29.863	77.8	74.8	84	...	3	...	Cum & Cum str.	
Totals.	...	...	...	...	10448	103.2	62.3	31	...	67	...	Cir str.	Cum. & Cum str.
Mean.	Calm.	0	...	...	29.871	78.6	75.2	83	82.2	6	...	Cir str.	Cum. & Cum str.

## SATURDAY, 7TH.

2.	S.E.	1	bcpm	...	29.861	74.8	70.0	75	...	8	...	Cum. & Cum. str.	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 84°, min. 75°.
4.	S.E.	2	bcpm	...	29.842	76.8	74.0	85	...	7	...	Cum.	Cum.	
6.	N.N.E.	1	be	...	29.858	76.3	74.3	89	82.2	7	...	Cum.	Cum.	
8.	E.S.	1	em	...	29.918	77.3	74.8	86	...	10	...	Cum.	Cum.	
10.	E.S.	2	be	...	29.916	79.5	76.3	84	...	8	...	Cum.	Cum.	
Noon.	E.S.	1	be	...	29.884	80.8	76.5	79	...	8	...	Cum. & Cum. str.	Cum.	
2.	N.N.E.	3	be	...	29.834	81.3	76.0	75	...	8	...	Cir. str.	Cum.	
4.	S.E.	0	be	...	29.831	82.8	77.5	75	...	3	...	Cir. & Cum. str.	Cum.	
6.	S.E.	0	be	...	29.837	81.8	76.0	73	82.5	3	...	Cir.	Str.	
8.	N.N.E.	1	be	...	29.895	80.3	75.0	74	...	3	...	Cum. & Cum. str.	Cum.	
10.	N.N.E.	3	bcl	...	29.896	79.8	75.3	78	...	6	...	Cum. & St.	Cum.	
Midt.	S.N.E.	2	be	...	29.895	79.3	74.3	75	...	7	...	Cum. & St.	Cum.	
Totals.	...	17	...	...	10470	110.8	60.0	108	...	78	...	Cir. str.	Cum. & Cum. str.	
Mean.	NE½S.	1	bclmp	...	29.872	79.2	75.0	79	82.3	6	...	Cir. str.	Cum. & Cum. str.	

## SUNDAY, 8TH.

2.	N.N.E.	2	be	...	29.885	78.8	74.3	78	...	8	...	Cum. str.	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 84° 5, min. 76° 2.
4.	N.N.E.	1	be	...	29.862	76.8	73.8	84	...	7	...	Cum. str.	Cum.	
6.	NE½E.	2	be	...	29.887	77.3	73.8	82	82.0	4	...	Cir.	Cum.	
8.	NE½E.	1	bcp	...	29.921	78.3	74.8	82	...	9	...	Cir. cum.	Cum.	
10.	N.E.	2	be	...	29.908	81.3	75.3	72	...	5	...	Cir.	Cum.	
Noon.	S.E.	4	be	...	29.883	82.3	75.3	68	...	9	...	Cum.	Cum.	
2.	S.E.	3	be	...	29.834	83.8	74.8	60	...	8	...	Cir. & Cum. str.	Cum.	
4.	S.E.	3	be	...	29.830	83.8	75.8	64	...	7	...	Cir. cum.	Cum.	
6.	S.N.E.	2	be	...	29.857	81.8	75.8	72	82.7	8	...	Cum. & St.	Cum.	
8.	S.N.E.	1	be	...	29.893	80.8	74.8	72	...	10	...	Cum.	Cum.	
10.	N.E.	1	be	...	29.905	80.3	74.8	73	...	5	...	Cum.	Cum.	
Midt.	S.E.	2	be	...	29.885	79.8	74.8	75	...	3	...	Cum.	Cum.	
Totals.	...	25	...	...	10550	5.1	58.1	882	...	83	...	Cir. & Cum. str.	Cum. & Cum. str.	
Mean.	NE½S.	2	...	...	29.879	80.4	74.8	73	82.3	7	...	Cir. cum.	Cum. str.	

## MONDAY, 9TH NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	4	bcm	...	29.850	78.5	73.5	75	...	4	...	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 84.5, min. 75.2.
4.	N.N.E.	3	bcm	...	29.834	78.3	72.8	73	...	4	...	Cum.&Cmst	
6.	N.	2	bc	...	29.851	76.3	72.8	82	82.0	5	...	Cum str.	
8.	N.	1	bc	...	29.887	77.8	72.8	75	...	8	...	Cum str.	
10.	N.	3	bc	...	29.886	79.8	74.8	75	...	9	...	Cum.	
Noon.	N.	1	bc	...	29.864	80.8	74.8	72	...	9	...	Cum.	
2.	N.	1	bc	...	29.822	81.8	74.8	68	...	9	...	Cum.	
4.	N.N.E.	1	bc	...	29.783	82.3	74.8	66	...	7	...	Cum. str.	
6.	N.N.W.	2	bc	...	29.788	80.5	73.5	67	81.7	9	...	Cir cum.	
8.	N.	1	c	...	29.791	79.8	73.8	71	...	10	...	Cum.	
10.	S.W.	2	c	...	29.816	77.3	73.8	82	...	10	...	Str.	
Midt.	S.W.	3	c	...	29.803	76.3	71.3	75	...	10	...	Str.	
Totals.	...	24	bcm	...	9975	169.5	43.5	881	...	94	...	Cum., Str., & Cum. str.	
Mean.	N.	2		...	29.831	79.1	73.6	73	81.8	8	...		

## TUESDAY, 10TH.

2.	N.	3	c	...	29.783	76.3	70.3	71	...	10	...	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 80.5, min. 74.5.
4.	N.	4	c	...	29.773	76.8	70.8	71	...	10	...	Cum.	
[6.	N.N.W.	2	oc	...	29.777	75.8	70.8	75	81.0	10	...	Cum str.	
8.	N.N.W.	3	oc	...	29.797	75.8	72.3	73	...	10	...	Cum str.	
10.	N.	1	op	...	29.792	76.8	72.3	77	...	10	...	Cum str.	
Noon.	N.	3	oc	...	29.768	79.8	74.8	75	...	10	...	Cum.&Cmst	
2.	N.	2	c	...	29.717	79.8	74.8	75	...	9	...	Cum.	
4.	N.	3	ocp	...	29.677	78.8	72.8	71	...	10	...	Cum.&Str.	
6.	N.	2	c	...	29.705	78.8	72.8	71	81.5	10	...	Cum.&Str.	
8.	N.	4	cp	...	29.712	76.3	72.8	82	...	10	...	Cum.&Nls	
10.	S.W.	4	cpq	...	29.729	76.3	73.3	84	...	9	...	Cum.&Cmst	6 to 9 P.M., heavy rain squalls.
Midt.	N.	2	cp	...	29.728	76.8	72.8	79	...	8	...	Cum.&Str.	
Totals.	...	33	cpq	...	8958	88.1	28.6	64	...	116	...	Cum., Str., & Cum. str.	
Mean.	N.	3		...	29.746	77.3	72.4	75	81.2	10	...		

## WEDNESDAY, 11TH.

2.	N.	3	cp	...	29.699	75.5	72.3	83	...	9	...	Cum.&Str.	At Manila. Temperature by self-registering thermo- meter, max. 80, min. 75.5. Sp. gr. 1.02406. 5 P.M., left Manila for Hong Kong.
4.	N.	2	cp	...	29.679	74.8	72.0	85	...	10	...	Cum.&Str.	
6.	N.	4	cp	...	29.686	74.8	72.0	85	79.7	10	...	Cum.	
8.	N.	1	cp	...	29.703	74.8	72.5	88	...	9	...	Cum str.	
10.	N.	2	cp	...	29.767	77.5	75.8	91	...	9	...	Cum.	
Noon.	N.	1	cp	...	29.734	77.3	75.8	92	...	10	...	Cum.	
2.	N.	2	c	...	29.678	77.0	75.8	93	...	10	...	Cum.&Cmst	
4.	Variable.	1	cp	...	29.666	78.5	76.5	89	80.5	10	...	Cum.&Cmst	
6.	E.S.E.	1	cp	...	29.694	78.5	76.3	88	...	9	...	Cum.&Cmst	
8.	S.W.	0	cp	...	29.736	77.3	75.8	91	81.0	10	...	Cum.	
10.	E.	1	cp	...	29.758	78.0	75.8	88	81.2	10	...	Cum.&Nls	
Midt.	N.E.	3	cp	...	29.721	77.8	75.8	89	81.2	10	...	Cum.	
Totals.	...	21	cp	...	8521	81.8	56.4	102	36	116	...	Cum., Str., & Cum. str.	
Mean.	S.W.	2		...	29.710	76.8	74.7	88	80.7	10	...		

## THURSDAY, 12TH NOVEMBER 1871.

Hour.	Wind.		Weather.	State of Sea, 6 to 5	Barometre, reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Surface of Sea.	Clouds, etc. to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	3	bc	...	29.691	78.5	76.3	88	82.5	8	...	Cum.	At noon, lat. 15° 8' N. long. 119° 50' E. Temperature by self-registering thermo- meter, max. 84°, min. 74°.
4.	N.E.	5	bc	...	29.691	78.8	76.3	87	82.5	5	...	Cm.&Cum.st	
6.	N.E.	3	bc	3	29.697	79.8	76.8	85	...	6	...	Cir str.	
8.	E.N.E.	5	bc	...	29.768	82.5	77.8	77	82.7	9	...	Cir cum.	
10.	E.N.E.	1	cp	...	29.740	82.3	77.8	78	83.0	9	...	Cm.&Cum.st	Sp. gr. 1.02502.
Noon.	N.E.	1	c	...	29.729	82.3	77.8	78	83.0	10	...	Cm.&Cum.st	
2.	E.N.E.	4	c	...	29.731	82.8	77.5	75	83.0	9	...	Cm.&Cum.st	
4.	Cal.	0	c	...	29.755	82.8	77.5	75	83.0	10	...	Cm.&Cum.st	
6.	Variable.	1	c	...	29.775	82.5	77.8	77	82.7	9	...	Cum.	Clouds from E.S.E.
8.	N.E.	2	oc	...	29.823	82.3	77.8	78	82.7	10	...	Cm.&Str.	
10.	N.E.	4	bc	...	29.831	82.3	77.3	78	82.5	7	...	Cum.	
Midt.	N.E.	3	bc	...	29.857	82.3	76.8	74	82.0	6	...	Cum.	
Totals.	...	35	...	3	9088	19.2	87.5	110	29.6	98	Cir cum.	Cum. & Cum str.	
Mean.	N.E.	3	cp	3	29.757	81.6	77.3	79	82.7	8	Cir str.		

## FRIDAY, 13TH.

2.	E.N.E.	3	bel	...	29.824	81.0	76.9	76	82.2	9	...	Cm.&Str.	At noon, lat. 16° 42' N. long. 119° 22' E. Temperature by self-registering thermo- meter, max. 83° 5, min. 79° 5.
4.	N.E.	2	bel	...	29.812	81.5	76.8	77	82.2	6	...	Cum.	
6.	N.E.	2	bc	...	29.853	81.0	76.8	79	82.9	6	...	Cum.	
8.	N.E.	2	bc	...	29.917	81.3	78.3	85	82.0	8	...	Cir cum.	
10.	...	...	bc	3	...	82.3	78.3	80	82.2	3	...	Cir cum.	Current, N. 25° W. 22°.
Noon.	N.E.	2	bc	2	29.920	81.3	77.3	80	82.2	5	...	Cir cum.	
2.	N.E.	3	bc	...	29.860	81.8	77.8	80	82.2	4	...	Cir.	
4.	N.E.	2	bc	...	29.858	81.8	77.8	80	82.2	4	...	Cir.	
6.	N.E.	3	bc	4	29.890	81.8	77.8	80	82.2	8	...	Cm.&Str.	Sp. gr. 1.02524.
8.	N.E.	3	bel	4	29.930	80.8	77.8	85	81.7	6	...	Cm.&Str.	
10.	N.E.	5	bc	4	29.926	79.8	76.8	85	81.2	9	...	Cm.&Str.	
Midt.	N.E.	5	bc	5	29.907	78.8	75.8	85	...	9	...	Cm.&Str.	
Totals.	...	32	...	22	9697	13.2	87.3	12	22.3	77	Cir cum.	Cum. & Str.	
Mean.	N.E.	3	bel	4	29.882	81.1	77.3	81	82.0	6	...		

## SATURDAY, 14TH.

2.	N.E.	5	c	...	29.920	78.3	75.3	84	...	9	...	Cum.	At noon, lat. 18° 12' N. long. 118° 8' E. Temperature by self-registering thermo- meter, max. 77°, min. 74°.
4.	N.E.	6	oc	...	29.918	77.3	75.3	89	81.0	10	...	Str.	
6.	N.E.	5	oc	...	29.947	74.8	74.8	100	...	10	...	Nimb.	
8.	N.E.	6	oc	...	29.951	75.8	73.8	89	78.9	10	...	Cm.&N.b	
10.	N.E.	6	bc	4	30.011	76.3	74.3	89	78.9	8	...	Cum.	Current, N. 24° W. 7°.
Noon.	N.E.	6	c	5	29.971	76.8	73.8	84	77.7	9	...	Cum.	
2.	N.E.	6	c	4	29.933	77.3	73.8	82	77.5	10	...	Cm.&Cum.st	
4.	N.E.	6	c	4	29.935	75.8	73.8	89	77.2	10	...	Cm.&Cum.st	
6.	N.E.	6	bc	4	29.966	74.8	73.3	91	...	8	...	Cir.	Sp. gr. 1.02539.
8.	N.E.	6	bc	4	29.992	74.8	72.8	89	77.5	8	...	Cir cum.	
10.	N.E.	6	bc	4	29.998	75.3	72.8	87	78.0	7	...	Cum.	
Midt.	N.E.	6	c	4	29.995	76.8	73.3	81	78.0	10	...	Cum.	
Totals.	...	79	...	33	11537	74.1	47.1	94	72.9	109	Cir cum.	Cum., Cum str., & Nimb.	
Mean.	N.E.	6	oc	4	29.961	76.2	73.9	88	78.1	9	...		

## SUNDAY, 15TH NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	6	e	4	30.092	76.3	71.8	77	78.0	10	...	Cum str.	At noon, lat. 20° 5' N. long. 115° 40' E. Temperature by self-registering thermo- meter, max. 75°, min. 71° 5. Current, s. 62° w. 52'. 3 to 4 A.M., wind squally. Sp. gr. 1.02516.
4.	N.E.	4	cpq	4	30.066	73.3	72.8	97	78.2	10	...	Cum.Cum.st	
6.	N.E.	4	oqp	4	30.019	73.8	72.3	91	77.2	10	...	Cum.&N.b	
8.	N.E.	4	c	4	30.059	...	...	...	77.5	10	...	Cum.&Str.	
10.	N.E.	4	eq	4	30.058	74.8	71.8	84	78.0	10	...	Cum.&Str.	
Noon.	N.E.	7	cq	4	30.043	73.8	70.3	81	78.2	10	...	Cum.&Str.	
2.	N.E.	6	c	4	29.999	73.8	70.0	80	78.0	10	...	Cum.	
4.	N.E.	6	bc	4	29.994	73.3	69.3	79	78.0	6	Cir.	Cum.	
6.	N.E.	5	c	3	30.051	72.3	68.8	82	77.0	10	...	Cum.&Coast	
8.	N.E.	5	c	3	30.092	72.3	68.3	79	76.7	10	...	Cum.&Str.	
10.	N.E.	5	c	3	30.098	71.8	66.2	71	75.5	10	...	Cum.&Str.	
Midt.	N.E.	5	c	3	30.103	71.3	65.0	68	75.0	10	...	Cum.&Str.	
Totals.	...	65	cpq	44	514	36.8	106.6	889	87.3	116	Cir.	Cum., Str., & Cum str.	
Mean.	N.E.	5		4	30.043	73.3	69.7	81	77.3	10			

## MONDAY, 16TH.

2.	N.E.	5	c	3	30.106	70.5	65.0	72	74.7	10	...	Cum.	At noon, lat. 22° 4' N. long. 114° 6' E. Temperature by self-registering thermo- meter, max. 74° 2, min. 67° 0. Sp. gr. 1.02428. 2 P.M., anchored in Hong Kong harbour.
4.	N.E.	4	cp	3	30.096	69.8	65.0	74	74.0	10	...	Cum.	
6.	N.E.	5	oe	3	30.118	66.8	62.8	78	74.0	10	...	Cum.&Str.	
8.	N.E.	4	oe	2	30.193	66.3	60.8	71	70.5	10	...	Cum.&Str.	
10.	N.W.	3	c	...	30.210	66.3	59.8	66	69.5	10	Cir str.	Cum.	
Noon.	N.W.	1	c	...	30.212	68.3	59.8	58	69.5	9	Cir cum.	Cum.	
2.	Caln.	0	bc	...	30.134	71.8	61.5	53	...	8	Cir cum.	Cum.&Str.	
4.	Caln.	0	bc	...	30.124	71.8	61.3	52	...	7	Cir str.	Cum.&Str.	
6.	Caln.	0	bc	...	30.120	68.8	60.8	60	71.0	9	Cir cum.	Cum.	
8.	Caln.	0	bc	...	30.162	68.3	57.8	51	...	9	Cir cum.	Cum.	
10.	N.E.	1	bc	...	30.162	67.8	56.8	49	...	3	...	Cum.	
Midt.	N.E.	2	b	...	30.177	66.8	56.8	52	...	0	...	...	
Totals.	...	25	bcp	11	1652	103.3	8.2	736	13.2	95	Cir cum. & Cir str.	Cum. & Str.	
Mean.	N.E.	2		3	30.150	68.6	60.7	61	71.9	8			

## TUESDAY, 17TH.

2.	N.E.	1	b	...	30.172	65.8	55.3	50	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 74°, min. 61°.
4.	N.	3	b	...	30.160	65.0	55.3	52	...	0	...	...	
6.	N.E.	1	b	...	30.174	62.8	55.8	63	70.0	0	...	...	
8.	N.E.	2	bu	...	30.225	65.8	55.8	52	...	0	...	...	
10.	Caln.	0	b	...	30.235	70.8	58.8	47	...	0	...	...	
Noon.	E.	2	b	...	30.192	70.3	57.8	46	...	0	...	...	
2.	E.	1	b	...	30.145	69.3	57.8	48	...	0	...	...	
4.	E.	2	b	...	30.143	68.3	57.3	49	...	0	...	...	
6.	E.	1	b	...	30.142	66.8	58.8	60	70.5	0	...	...	
8.	Caln.	0	b	...	30.174	64.8	58.8	68	...	0	...	...	
10.	Caln.	0	b	...	30.204	63.3	58.3	72	...	0	...	...	
Midt.	Caln.	0	b	...	30.189	63.3	58.0	71	...	0	...	...	
Totals.	...	13	bu	...	2155	76.3	87.8	678	...	0	...	...	
Mean.	N.E.	1		...	30.179	66.4	57.3	56	70.2	0			

## WEDNESDAY, 18th NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometre, reduced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.165	62.8	58.3	74	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 75°, min. 61°.
4.	Calm.	0	b	...	30.153	62.3	58.3	77	...	0	...	...	
6.	Calm.	0	bc	...	30.185	62.8	60.8	88	70.0	1	...	Cum.	
8.	S.E.	1	b	...	30.227	67.8	62.3	70	...	0	...	...	
10.	Calm.	0	b	...	30.237	70.8	62.8	61	...	0	...	...	
Noon.	E.	1	bc	...	30.223	68.8	60.8	60	...	1	...	Cum.	
2.	E.	1	b	...	30.114	68.8	60.8	60	...	0	...	...	
4.	E.	1	b	...	30.073	67.8	59.8	60	...	0	...	...	
6.	E.	1	bm	...	30.110	65.3	58.3	63	70.5	0	...	...	
8.	E.	1	bm	...	30.171	65.8	58.8	64	...	0	...	...	
10.	E.	1	b	...	30.155	65.8	58.3	62	...	0	...	...	
Midt.	E.S.E.	1	bc	...	30.156	65.3	59.8	71	...	3	...	Cum.	
Totals.	...	11	bcm	...	1969	74.1	119.1	810	...	5	...	Cum.	
Mean.	E.	1		...	30.164	66.2	59.9	67	70.2	1	...	Cum.	

## THURSDAY, 19th.

2.	E.N.	3	bc	...	30.148	65.8	61.3	75	...	3	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 76°, min. 62° 5.
4.	E.N.	1	bc	...	30.151	64.8	60.8	78	...	1	...	Cum.	
6.	E.S.E.	1	bf	...	30.166	64.8	60.3	75	69.7	0	...	...	
8.	E.N.	1	b	...	30.209	65.8	60.3	71	...	0	...	...	
10.	E.N.	1	b	...	30.211	71.5	63.8	62	...	0	...	...	
Noon.	E.	3	b	...	30.207	71.8	64.3	63	...	0	...	...	
2.	E.	3	bc	...	30.096	73.3	65.8	64	...	3	Cir cum.	Cum.	
4.	E.	1	bc	...	30.090	73.8	65.8	62	...	2	Cir.	Cum.	
6.	E.	1	bc	...	30.133	68.8	63.8	73	70.2	8	Cir.	Cum.	
8.	E.	1	bc	...	30.154	67.8	63.8	78	...	4	...	Cum.	
10.	E.N.E.	3	bc	...	30.161	66.8	64.3	85	...	3	...	Cum.	
Midt.	S.E.	1	bc	...	30.152	67.5	64.8	84	...	1	...	Cum.	
Totals.	...	23	bc	...	1878	102.5	39.1	870	...	25	...	Cum.	
Mean.	E.N.	2		...	30.156	68.5	63.3	72	69.9	2	...	Cum.	

## FRIDAY, 20th.

2.	E.	1	bc	...	30.145	66.8	63.8	83	...	2	Str.	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 79.5, min. 64.2.
4.	Calm.	0	b	...	30.137	66.8	62.8	78	...	0	...	...	
6.	E.	1	bc	...	30.173	66.8	63.8	83	69.5	4	...	Cum. & Str.	
8.	E.	2	bc	...	30.185	68.3	64.3	78	...	2	...	Cum. & Str.	
10.	E.	3	bc	...	30.193	73.8	67.8	70	...	3	...	Cum.	
Noon.	E.	1	bc	...	30.142	74.0	68.3	71	...	3	...	Cum.	
2.	E.	2	bc	...	30.085	77.3	70.8	69	...	3	...	Cum. & Str.	
4.	E.	1	bc	...	30.079	73.5	68.8	75	...	1	Cir str.	Cum.	
6.	E.	1	bc	...	30.067	68.8	66.8	88	70.0	1	...	Cum.	
8.	E.	1	b	...	30.107	68.8	66.3	85	...	0	...	...	
10.	Calm.	0	b	...	30.140	68.3	65.3	83	...	0	...	...	
Midt.	E.	1	b	...	30.116	67.8	65.3	85	...	0	...	...	
Totals.	...	14	bc	...	1590	1.0	74.1	948	...	19	...	Cum. & Str.	
Mean.	E.	1		...	30.130	70.1	66.2	79	69.7	2	...	Cum. & Str.	

## SATURDAY, 21ST NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea-Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	1	b	...	30.123	67.3	64.8	85	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 74° 5, min. 66° 2.
4.	E.	1	bc	...	30.081	66.8	63.8	83	...	4	...	Cum.	
6.	E.	1	bc	...	30.120	67.8	64.8	83	70.0	6	...	Cum.	
8.	E.	1	bc	...	30.127	68.8	64.8	78	...	6	...	Cum.	
10.	E.	2	cd	...	30.153	66.5	64.8	90	...	10	...	Cum.	
Noon.	E.	1	cd	...	30.123	70.0	66.5	81	...	8	...	Cum.	
2.	E.	2	c	...	30.072	70.8	66.8	78	...	10	...	Cum.	
4.	E.	1	...	...	...	...	...	...	...	...	...	...	
6.	E.S.	3	c	...	30.026	70.8	66.8	78	70.0	10	...	Cin.&Str.	
8.	E.	1	bc	...	30.052	69.8	65.8	78	...	...	...	Cin.&Str.	
10.	E.	3	bc	...	30.088	69.8	64.8	73	...	...	...	Cin.&Str.	
Midt.	E.S.	1	b	...	30.099	69.3	65.8	81	...	0	...	...	
Totals.	...	18	bcd	...	1064	97.7	59.5	8	...	54	...	Cum. & Str.	
Mean.	E.	1		...	30.097	68.9	65.4	81	70.0	6	...	...	

## SUNDAY, 22d.

2.	E.	2	bc	...	30.046	69.3	67.3	88	...	7	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 79° 5, min. 66° 2.
4.	E.	1	c	...	30.040	69.3	67.3	88	...	10	...	Cum.	
6.	E.	1	c	...	30.022	69.8	67.5	87	69.7	9	...	Cin.&Str.	
8.	E.	1	bc	...	30.074	71.3	68.8	86	...	3	...	Cum.	
10.	N.E.	1	bc	...	30.067	75.3	70.8	77	...	3	...	Cir.	
Noon.	E.	1	bc	...	30.034	74.8	71.3	81	...	5	...	Cir str.	
2.	E.	1	bc	...	29.975	74.3	71.3	84	...	4	...	Cum.	
4.	Calm.	0	bc	...	29.975	74.8	71.8	84	...	3	...	Cum.	
6.	Calm.	0	bc	...	29.985	71.8	69.8	89	70.2	1	...	Cum.	
8.	E.	1	bcm	...	30.011	69.8	68.3	91	...	3	...	Cum.	
10.	Calm.	0	bcm	...	30.035	69.3	67.8	91	...	4	...	Cum.	
Midt.	Calm.	0	bcm	...	30.034	68.8	66.8	88	...	3	...	Cum.	
Totals.	...	9	bcm	...	298	18.6	108.8	74	...	55	...	Cir str.	Cum.
Mean.	E.	1		...	30.025	71.5	69.1	86	70.0	5	...	...	

## MONDAY, 23d.

2.	Calm.	0	b	...	30.068	68.0	66.8	93	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 79° 5, min. 66° 7.
4.	Calm.	0	bc	...	30.038	68.0	66.8	93	...	2	...	Cum.	
6.	Calm.	0	bm	...	30.022	67.8	66.8	94	69.7	0	...	...	
8.	Calm.	0	bcm	...	30.060	69.8	68.5	93	...	6	...	Cum.	
10.	Calm.	0	bc	...	...	...	...	...	...	3	...	Cum.	
Noon.	Calm.	0	bc	...	30.026	75.8	70.8	75	...	4	...	Cum.	
2.	Calm.	0	bc	...	30.064	76.8	71.8	75	...	3	...	Cum.	
4.	Calm.	0	bc	...	29.987	78.8	73.8	75	...	5	...	Cir.	
6.	Calm.	0	b	...	29.989	74.3	71.0	83	69.7	0	...	...	
8.	Calm.	0	b	...	30.029	71.8	68.8	84	...	0	...	...	
10.	Calm.	0	bm	...	30.032	70.8	68.8	88	...	0	...	...	
Midt.	Calm.	0	bm	...	30.036	70.8	68.8	88	...	0	...	...	
Totals.	...	...	bcm	...	291	22.7	102.7	61	...	23	...	Cir.	Cum.
Mean.	Calm.	0		...	30.026	72.1	69.3	86	69.7	2	...	...	

## TUESDAY, 24TH NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 9 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 9 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	bww	...	30.024	69.8	67.8	88	...	0	...	...	At Hong Kong. Temperature by self-registering thermometer, max. 83° 5, min. 68° 0.
4.	Calm.	0	b	...	30.094	68.8	66.8	88	...	0	...	...	
6.	Calm.	0	bm	...	30.052	69.3	67.0	87	69.7	0	...	...	
8.	Calm.	0	bcm	...	30.103	74.5	70.8	80	...	5	Cir str.	...	
10.	Calm.	0	be	...	30.127	77.5	71.8	72	...	3	...	...	
Noon.	Calm.	0	be	...	30.094	79.8	71.8	63	...	3	...	...	
2.	E.	3	be	...	30.058	78.3	70.8	65	...	6	Str.	Cum. & Str.	
4.	E.	2	om	...	30.085	72.8	69.8	84	...	10	...	Cum.	
6.	E.	4	ocp	...	30.108	70.8	67.3	80	69.7	9	...	Cum.	
8.	E.	3	cnp	...	30.159	69.5	67.3	88	...	10	...	Cum.	
10.	E.	3	cm	...	30.192	68.8	65.8	83	...	9	...	Cum.	
Midt.	E.	2	ed	...	30.193	66.8	65.8	94	...	10	...	Cum.	
Totals.	...	17	bemp	...	1189	26.7	102.8	972	...	65	Cir str.	Cum. & Str.	
Mean.	E.	1		...	30.099	72.2	68.6	81	69.7	5	...	...	

## WEDNESDAY, 25TH.

2.	E.	4	cr	...	30.193	66.8	63.8	83	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 67° 5, min. 63° 0.
4.	E.N.	2	e	...	30.183	66.8	63.8	83	...	10	...	Cum.	
6.	E.N.	3	e	...	30.212	64.8	62.0	84	...	10	...	Cum.	
8.	S.N.E.	2	be	...	30.253	64.8	61.8	83	...	9	...	Cum.	
10.	E.	1	be	...	30.264	65.8	62.8	83	...	8	...	Cum.	
Noon.	E.	2	e	...	30.240	66.3	62.3	78	...	10	...	Cum.	
2.	S.E.	1	e	...	30.186	65.8	61.8	78	...	10	...	Cum.	
4.	S.N.E.	2	be	...	30.183	65.8	60.8	73	...	9	...	Cum.	
6.	E.	1	e	...	30.196	64.8	60.8	78	...	10	...	Cum.	
8.	E.	1	be	...	30.237	62.8	58.8	77	...	8	...	Cum.	
10.	S.N.E.	1	e	...	30.308	61.8	57.8	77	...	9	...	Cum.	
Midt.	S.E.	2	e	...	30.272	59.8	55.8	76	...	10	...	Cum. & Cum	
Totals.	...	22	be	...	2727	56.1	12.3	113	...	113	...	Cum.	
Mean.	E.N.E.	2		...	30.227	64.7	61.0	79	...	9	...	...	

## THURSDAY, 26TH.

2.	S.E.	2	e	...	30.266	57.8	54.8	81	...	9	Cir cum.	Cum. & Str.	At Hong Kong. Temperature by self-registering thermometer, max. 59° 5, min. 52° 5.
4.	S.N.E.	2	e	...	30.264	57.3	53.8	78	...	10	...	Cum. & Str.	
6.	S.N.E.	2	e	...	30.300	55.3	52.8	84	...	8	...	Cum.	
8.	S.E.	3	e	...	30.367	53.8	50.8	80	...	10	...	Cum.	
10.	S.	5	e	...	30.376	54.8	50.8	75	...	10	Str.	Cum.	
Noon.	S.N.E.	2	e	...	30.336	56.8	52.8	75	...	10	Str.	Cum.	
2.	S.	2	e	...	30.288	56.8	52.8	75	...	10	Cir cum.	Cum.	
4.	S.E.	2	be	...	30.287	57.3	52.3	70	...	8	...	Cum.	
6.	S.E.	2	e	...	30.361	53.8	50.8	80	69.5	10	...	Cum. & Str.	
8.	S.E.	2	e	...	30.320	52.8	48.8	74	...	9	...	Cum. & Str.	
10.	S.	1	e	...	30.349	52.8	47.8	69	...	10	...	Cum.	
Midt.	S.N.W.	2	e	...	30.341	51.8	47.3	71	...	9	...	Cum.	Clouds from s.w.
Totals.	...	27	c	...	795	61.1	15.6	912	...	113	Cir cum. & Str.	Cum. & Str.	
Mean.	S <sup>1</sup> E <sup>1</sup> E.	2		...	30.316	55.1	51.3	76	69.5	9	...	...	

## FRIDAY, 27TH NOVEMBER 1874.

Hour.	Wind.		Weather.	State of Sea 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	1	e	...	30.332	51.8	47.3	71	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 60°, min. 48°-5.
4.	N.N.W.	3	e	...	30.327	51.5	46.3	67	...	9	...	Cum.	
6.	N.E.	1	e	...	30.346	50.3	46.3	74	68.5	10	...	Cum.	
8.	N.E.	1	e	...	30.356	50.8	45.8	68	...	10	...	Cum.	
10.	N.E.	1	cpm	...	30.406	53.8	46.8	59	...	10	...	Cum.	
Noon.	N.E.	1	e	...	30.361	51.8	47.3	71	...	9	Str.	Cum.	
2.	N.E.	1	e	...	30.290	53.8	48.3	66	...	10	...	Cm.&Str.	
4.	N.E.	1	be	...	30.288	53.8	47.8	64	...	9	...	Cm.&Str.	
6.	N.E.	0	e	...	30.281	53.8	46.8	59	68.0	10	Str.	Cir cum.	
8.	N.E.	1	be	...	30.310	51.8	45.8	64	...	4	...	Cum.	
10.	N.E.	0	be	...	30.307	52.8	46.3	61	...	8	...	Cum.	
Midt.	S.	1	be	...	30.270	51.8	45.8	64	...	4	...	Cum.	
Totals.	...	12	...	...	3874	27.8	80.6	788	...	103	...	...	
Mean.	N.E.b.N.	1	be pm	...	30.323	52.3	46.7	66	68.2	9	Str.	Cum. & Str.	

## SATURDAY, 28TH.

2.	N.	2	be	...	30.262	51.8	45.8	64	...	4	Cir.	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 69°-5, min. 48°-0.
4.	Caln.	0	b	...	30.252	51.8	44.8	59	...	2	Cir.	...	
6.	Caln.	0	b	...	30.265	51.5	46.5	68	67.0	0	...	...	
8.	Caln.	0	b	...	30.285	54.3	46.8	57	...	0	...	...	
10.	N.	1	b	...	30.294	63.8	56.3	61	...	0	...	...	
Noon.	N.	1	b	...	30.228	64.3	54.3	51	...	0	...	...	
2.	Caln.	0	b	...	30.175	66.8	54.8	46	...	0	...	...	
4.	Caln.	0	be	...	30.178	65.3	55.8	53	...	1	...	Cum.	
6.	Caln.	0	b	...	30.172	61.8	53.8	58	67.5	0	...	...	
8.	Caln.	0	b	...	30.195	59.5	52.8	63	...	0	...	...	
10.	Caln.	0	b	...	30.214	58.8	51.3	59	...	0	...	...	
Midt.	Caln.	0	b	...	30.220	57.3	50.8	63	...	0	...	...	
Totals.	...	...	...	...	2740	197.0	13.8	702	...	7	...	...	
Mean.	Caln.	0	be	...	30.228	58.9	51.1	59	67.2	1	Cir.	Cum.	

## SUNDAY, 29TH.

2.	Caln.	0	b	...	30.202	56.8	50.3	63	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 72°, min. 55°.
4.	Caln.	0	b	...	30.209	55.8	48.8	69	...	0	...	...	
6.	N.E.	1	bcm	...	30.203	55.8	49.8	65	67.0	1	Cir cum.	...	
8.	E.	0	bm	...	30.250	63.3	54.3	55	...	0	...	...	
10.	E.	1	b	...	30.246	66.5	55.8	50	...	0	...	...	
Noon.	E.	2	be	...	30.220	69.8	57.3	45	...	1	Cir.	...	
2.	S.W.	1	b	...	30.183	69.3	57.8	49	...	0	...	...	
4.	S.W.	1	b	...	30.154	67.8	57.3	50	...	0	...	...	
6.	Caln.	0	b	...	30.161	63.8	56.8	63	67.2	0	...	...	
8.	Caln.	0	b	...	30.214	62.3	56.8	70	...	0	...	...	
10.	Caln.	0	b	...	30.190	60.8	53.8	62	...	0	...	...	
Midt.	Caln.	0	bm	...	30.194	59.8	53.8	66	...	0	...	...	
Totals.	...	6	...	...	2417	31.8	52.6	698	...	2	...	...	
Mean.	Variable.	1	bcm	...	30.201	62.6	54.4	58	67.1	0	Cir.	...	

## MONDAY, 30TH NOVEMBER 1874.

Hour.	Wind		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 29° and Sea Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	S.E.	1	bc	...	30.184	61.0	56.3	73	...	2	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 76°, min. 58° 5.
4.	S.E.	12	b	...	30.159	60.8	56.3	74	...	0	...	...	
6.	S.S.E.	1	bc	...	30.196	60.3	54.8	69	67.0	2	Cir.	...	
8.	Variable.	1	bc	...	30.233	62.8	54.8	59	...	1	Cir.	...	
10.	E.	1	bc	...	30.242	63.8	59.8	53	...	4	Cir cum.	...	
Noon.	E.	0	bc	...	30.173	70.8	59.8	50	...	1	Cir str.	...	
2.	E.	1	b	...	30.130	72.8	60.8	48	...	0	...	...	
4.	E.	1	b	...	30.124	72.8	62.5	53	...	0	...	...	
6.	Calm.	0	b	...	30.161	64.8	57.8	63	67.0	0	...	...	
8.	Calm.	0	b	...	30.187	63.8	57.8	67	...	0	...	...	
10.	Calm.	0	bcm	...	30.211	63.8	58.0	68	...	3	...	Str.	Cum.
Midt.	S.W.	1	bcm	...	30.201	63.8	58.8	72	...	3	...	...	
Totals.	...	9	...	...	2201	67.3	97.5	749	...	16	Cir str.	Cum & Str.	
Mean.	N.E.	1	...	...	30.183	65.6	58.1	62	67.0	1	...	...	

## TUESDAY, 1ST DECEMBER.

2.	S.	2	bcm	...	30.175	63.8	60.3	79	...	7	Cir.	Cum str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 76°, min. 60°.
4.	Calm.	0	bcm	...	30.186	62.3	58.8	79	...	8	...	Cum.	
6.	Calm.	0	bc	...	30.205	61.3	58.3	82	67.2	4	...	Cum & Str.	
8.	Calm.	0	b	...	30.251	61.3	56.0	71	...	0	...	...	
10.	Calm.	0	b	...	30.260	65.8	55.8	52	...	0	...	...	
Noon.	Calm.	0	b	...	...	...	...	...	...	0	...	...	
2.	S.	1	bm	...	30.159	71.0	59.8	50	...	0	...	...	
4.	S.W.	2	bm	...	30.123	66.8	62.8	78	...	0	...	...	
6.	Calm.	0	b	...	30.146	66.8	59.8	64	67.0	0	...	...	
8.	Calm.	0	b	...	30.167	64.3	58.8	70	...	0	...	...	
10.	Calm.	0	b	...	30.181	62.8	57.8	72	...	0	...	...	Cum & Str.
Midt.	Calm.	0	b	...	30.177	62.3	58.8	80	...	0	...	...	
Totals.	...	...	...	...	2030	48.5	97.0	777	...	19	Cir.	Cum & Str.	
Mean.	Calm.	0	...	...	30.185	64.4	58.8	71	67.1	2	...	...	

## WEDNESDAY, 2d.

2.	Calm.	0	bm	...	30.166	61.8	57.8	77	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 79°, min. 58° 7.
4.	Calm.	0	bm	...	30.157	60.5	54.0	64	...	0	...	...	
6.	Calm.	0	bm	...	30.152	59.8	54.5	70	67.0	0	...	...	
8.	Calm.	0	b	...	30.213	60.8	54.8	67	...	0	...	...	
10.	Calm.	0	b	...	30.215	67.8	58.8	56	...	0	...	...	
Noon.	Calm.	0	b	...	30.169	71.8	61.8	54	...	0	...	...	
2.	Calm.	0	b	...	30.146	73.3	61.8	50	...	0	...	...	
4.	Calm.	0	b	...	30.139	73.3	62.8	53	...	0	...	...	
6.	Calm.	0	b	...	30.161	66.8	59.8	64	67.0	0	...	...	
8.	Calm.	0	b	...	30.163	64.0	58.0	67	...	0	...	...	...
10.	Calm.	0	b	...	30.160	63.3	58.3	72	...	0	...	...	
Midt.	Calm.	0	b	...	30.148	62.8	57.8	72	...	0	...	...	...
Totals.	...	...	...	...	1989	786.0	100.2	766	...	...	...	...	
Mean.	Calm.	0	...	...	30.166	65.5	58.4	64	67.0	0	...	...	

## THURSDAY, 3D DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.146	61.8	57.8	77	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 74°, min. 59° 5.
4.	Calm.	0	b	...	30.141	61.8	57.8	77	...	0	...	...	
6.	Calm.	0	bc	...	30.164	61.5	59.0	85	66.7	4	...	Cum.	
8.	E.	1	bcm	...	30.191	62.5	59.3	81	...	4	...	Cir cum.	
10.	E.	2	bc	...	30.205	69.0	62.5	66	...	2	...	Cir.	
Noon.	E.	1	bc	...	30.182	69.5	61.8	61	...	4	...	Cir str.	
2.	E.S.	2	bc	...	30.145	70.3	61.3	57	...	2	...	Cir str.	
4.	E.S.	1	bc	...	30.146	69.3	60.8	58	...	3	...	Cir str.	
6.	E.	2	bc	...	30.128	65.8	60.3	71	67.0	2	...	Cm. & Str.	
8.	E.	1	bc	...	30.160	65.5	60.3	72	...	4	...	Cm. & Str.	
10.	E.	2	bc	...	30.175	65.5	59.8	70	...	3	...	Cum.	
Midt.	E.	3	bc	...	30.177	65.3	59.8	71	...	4	...	Cum.	
Totals.	...	15	bcm	...	1960	67.8	0.5	846	...	32	...	Cir str.	Cum. & Str.
Mean.	E.	1		...	30.163	65.6	60.0	70	66.8	3	...	...	...

## FRIDAY, 4TH.

2.	E.	2	bc	...	30.164	64.3	59.8	75	...	4	...	Cum.	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 78°, min. 62°.
4.	E.	3	bc	...	30.159	63.8	57.3	65	...	8	...	Cum.	...	
6.	E.	1	c	...	30.167	62.8	57.8	72	66.7	10	...	Cum.	...	
8.	E.	1	c	...	30.204	63.5	58.3	71	...	10	...	Cum.	...	
10.	E.	1	bc	...	30.251	67.3	60.5	65	...	9	...	Cum.	...	
Noon.	E.	1	bc	...	30.228	69.5	60.3	55	...	9	...	Cum.	...	
2.	E.	1	bc	...	30.170	71.0	61.8	56	...	7	...	Cum.	...	
4.	E.	1	bc	...	30.151	71.5	62.5	57	...	8	...	Cum.	...	
6.	E.	1	bc	...	30.167	66.3	60.8	71	66.5	4	...	Cum.	...	
8.	Calm.	0	b	...	30.183	65.3	60.8	76	...	0	...	...	...	
10.	S.E.	1	b	...	30.197	64.8	61.0	79	...	0	...	...	...	...
Midt.	S.E.	1	bc	...	30.209	61.8	60.8	94	...	1	...	...	Str.	
Totals.	...	14	bc	...	2250	71.9	1.7	836	...	70	...	...	Cum.	
Mean.	E.S.	1		...	30.187	66.0	60.1	70	66.9	6	...	...	...	

## SATURDAY, 5TH.

2.	E.	1	bc	...	30.200	63.3	60.8	85	...	1	...	...	Str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 75°, min. 61°.
4.	E.	1	bcm	...	30.196	63.0	59.8	81	...	1	...	...	Str.	
6.	E.	2	bc	...	30.207	62.3	59.8	85	66.7	2	...	...	Cum.	
8.	E.	2	bc	...	30.254	68.8	63.8	79	...	2	...	...	Cum.	
10.	E.	1	bc	...	30.260	71.3	64.8	67	...	1	...	...	Cum.	
Noon.	E.	1	bc	...	30.223	68.8	61.8	64	...	1	...	...	Cir cum.	
2.	E.	2	b	...	30.160	71.8	63.0	58	...	0	...	...	...	9.30 P.M., observed a brilliant meteor with a fiery tail to S.E., falling from an altitude of about 40° to 20°.
4.	E.	1	b	...	30.166	70.8	62.8	61	...	0	...	...	...	
6.	E.	1	bcm	...	30.171	66.8	60.3	66	66.5	0	...	...	...	
8.	E.	1	b	...	30.187	65.3	60.3	73	...	0	...	...	...	
10.	Calm.	0	b	...	30.196	63.8	59.8	77	...	0	...	...	...	
Midt.	E.	2	b	...	30.208	63.8	59.8	77	...	0	...	...	...	
Totals.	...	15	bcm	...	2428	79.8	16.8	867	...	9	...	...	Cum & Str.	
Mean.	E.	1		...	30.202	66.6	61.4	72	66.6	1	...	...	...	

## SUNDAY, 6TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to sea-level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	E.	2	b	...	30.193	61.5	59.8	73	...	0	...	...	At Hong Kong. Temperature by self-registering thermometer, max. 74.5, min. 62.5.
4.	E.	4	b	...	30.193	63.8	59.8	77	...	0	...	...	
6.	E.	2	b	...	30.205	63.5	57.8	68	66.2	0	...	...	
8.	E.	2	bc	...	30.233	67.8	60.8	64	...	2	Str.	Cum.	
10.	E.	2	bc	...	30.267	70.3	61.3	57	...	3	Str.	Cum.	
Noon.	E.S.	2	bc	...	30.262	74.3	63.8	54	...	4	Cir cum.	Cum.	
2.	E.	1	bc	...	30.295	71.0	64.8	68	...	9	...	Cum.	
4.	E.S.	2	bc	...	30.293	70.8	63.3	63	...	3	...	Cir cum.	
6.	E.	3	bc	...	30.219	67.8	62.8	73	66.5	8	...	Cum.	
8.	E.	1	bc	...	30.293	67.3	63.3	78	...	5	...	Cum.	
10.	E.	3	bc	...	30.258	65.8	62.3	80	...	8	...	Cum.	
Midn.	E.	4	bc	...	30.251	65.3	61.8	81	...	3	...	Cum.	
Totals.	...	28	bc	...	2782	92.2	21.6	836	...	45	Str. & Cir cum.	Cum.	
Mean.	E.	2		...	30.232	67.7	61.8	70	66.3	4			

## MONDAY, 7TH.

2.	E.	3	bc	...	30.253	64.8	60.8	78	...	3	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 74, min. 63.
4.	E.	2	bc	...	30.249	64.8	61.3	80	...	4	...	Cum.	
6.	E.	1	bc	...	30.274	64.0	60.3	78	66.2	7	...	Cum. & Str.	
8.	E.	3	bc	...	30.288	65.5	60.8	74	...	4	...	Cum. & Str.	
10.	E.	2	b	...	30.292	72.0	63.8	60	...	0	...	...	
Noon.	E.	3	bc	...	30.266	69.8	63.5	68	...	3	...	Cum.	
2.	E.	2	bc	...	30.299	72.8	64.8	62	...	1	...	Cum.	
4.	E.	2	bc	...	30.185	70.8	64.8	69	...	1	...	Cum.	
6.	E.	2	bc	...	30.196	66.8	62.8	78	66.5	2	...	Cum.	
8.	E.	3	bc	...	30.215	64.8	61.8	83	...	3	...	Cum.	
10.	E.	2	b	...	30.212	64.8	61.8	83	...	0	...	...	
Midn.	E.	4	b	...	30.204	64.8	61.8	83	...	0	...	...	
Totals.	...	29	bc	...	2843	85.7	28.3	896	...	28	...	Cum. & Str.	
Mean.	E.	2		...	30.237	67.1	62.4	75	66.3	2			

## TUESDAY, 8TH.

2.	E.	5	bc	...	30.217	64.3	62.3	88	...	4	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 74.2, min. 61.5.
4.	E.	3	bc	...	30.203	63.8	60.8	82	...	8	...	Cum.	
6.	E.	2	b	...	30.223	62.8	60.3	85	66.2	4	...	Cum.	
8.	E.	3	bc	...	30.235	70.8	63.8	65	...	2	Cir.	...	
10.	E.	3	bc	...	30.213	69.8	63.8	69	...	1	Cir.	...	
Noon.	E.	2	bc	...	30.205	70.8	64.5	68	...	1	Cir.	...	
2.	E.	3	b	...	30.151	72.8	65.5	65	...	0	Cir.	...	
4.	E.	2	b	...	30.130	71.3	64.8	67	...	0	...	...	
6.	E.	1	bc	...	30.150	65.8	61.8	78	66.5	1	...	Cum.	
8.	E.	1	b	...	30.146	64.8	61.8	83	...	0	...	...	
10.	N.N.E.	3	bc	...	30.164	64.8	61.8	83	...	4	...	Cum. & Str.	Sp. gr. 1.02407.
Midn.	N.E.	2	c	...	30.161	64.8	61.8	83	...	10	...	Cum. & Str.	
Totals.	...	30	bc	...	2196	86.6	33.0	916	...	36	Cir.	Cum. & Str.	
Mean.	E.S.	2		...	30.183	67.2	62.7	76	66.3	3			

## WEDNESDAY, 9TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	1	bc	...	30.157	64.3	61.8	85	...	8	...	Cm.&Str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 76°, min. 67.5°.
4.	E.	1	bc	...	30.157	64.5	61.8	83	...	8	...	Cm.&Str.	
6.	E.	1	bc	...	30.154	63.3	61.3	88	66.2	7	...	Cm.&Str.	
8.	E.	1	bc	...	30.184	64.8	61.8	83	...	8	...	Str.	
10.	E.	1	c	...	30.204	65.3	62.5	84	...	8	...	Cum.	
Noon.	E.	1	bc	...	30.151	71.3	65.8	71	...	2	...	Cum.	
2.	E.	1	bc	...	30.096	70.8	66.8	78	...	3	...	Cir.	
4.	E.	1	bc	...	30.063	70.3	65.8	75	...	2	...	Cir.	
6.	E.	1	bm	...	30.055	67.5	64.0	81	66.7	0	...	...	
8.	...	...	...	...	...	...	...	...	...	...	...	...	
10.	Calm.	0	bm	...	30.093	65.3	62.8	85	...	0	...	...	Totals.
Midt.	Calm.	0	bm	...	30.120	64.8	62.3	85	...	0	...	...	
Mean.	E.	1	...	...	30.130	66.6	63.3	82	66.4	4	...	...	

## THURSDAY, 10TH.

2.	E.	1	bc	...	30.051	64.3	61.8	85	...	2	Cir.	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 75°, min. 67.7°.
4.	Calm.	0	bc	...	30.031	63.8	61.8	88	...	1	Cir.	Cum.	
6.	N.W.	2	bc	...	30.139	64.8	63.5	93	66.2	1	...	Cum.	
8.	Calm.	0	b	...	30.176	66.3	62.8	81	...	0	...	...	
10.	N.	1	bc	...	30.170	69.8	63.8	69	...	1	...	Cum.	
Noon.	N.	1	b	...	30.146	71.8	64.8	65	...	0	...	...	
2.	N.W.	1	bm	...	30.085	70.8	63.8	65	...	0	...	...	
4.	N.W.	2	bm	...	30.072	69.8	62.3	63	...	0	...	...	
6.	N.	1	bem	...	30.089	66.8	60.8	68	67.0	1	Cir str.	...	
8.	E.	1	bm	...	30.128	65.0	58.3	64	...	0	...	...	Totals.
10.	N.E.	2	b	...	30.153	63.3	58.3	72	...	0	...	...	
Midt.	N.E.	2	b	...	30.156	61.8	58.8	82	...	0	...	...	
Mean.	N.W.	1	...	...	30.116	66.5	61.7	75	66.6	1	...	...	Totals.
Mean.	N.W.	1	...	...	30.116	66.5	61.7	75	66.6	1	...	...	
Mean.	N.W.	1	...	...	30.116	66.5	61.7	75	66.6	1	...	...	

## FRIDAY, 11TH.

2.	Calm.	0	bm	...	30.150	60.8	51.8	54	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 78°, min. 58°.
4.	Calm.	0	bm	...	30.149	59.8	51.3	56	...	0	...	...	
6.	Calm.	0	b	...	30.150	59.8	51.8	58	66.0	0	...	...	
8.	Calm.	0	b	...	30.196	62.8	54.8	59	...	0	...	...	
10.	Calm.	0	bc	...	30.203	65.3	55.8	53	...	2	Cir.	...	
Noon.	Variable.	1	bc	...	30.153	71.3	60.8	52	...	2	Cir.	...	
2.	Calm.	0	bc	...	30.125	70.3	59.3	50	...	2	Cir.	...	
4.	N.E.	1	bc	...	30.098	69.3	58.8	52	...	2	Cir cum.	...	
6.	N.E.	1	bc	...	30.111	64.8	56.3	57	66.7	1	Cir.	...	
8.	Calm.	0	bm	...	30.144	63.8	55.8	59	...	0	...	...	Totals.
10.	Calm.	0	b	...	30.151	62.3	53.8	56	...	0	...	...	
Midt.	Calm.	0	b	...	30.149	61.3	54.3	62	...	0	...	...	
Mean.	Calm.	0	...	...	30.148	64.3	55.4	56	66.3	1	...	...	Totals.
Mean.	Calm.	0	...	...	30.148	64.3	55.4	56	66.3	1	...	...	
Mean.	Calm.	0	...	...	30.148	64.3	55.4	56	66.3	1	...	...	

## SATURDAY, 12TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	Calm.	0	b	...	30.161	59.8	55.3	73	...	0	...	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 74°, min. 55.7°
4.	Calm.	0	b	...	30.141	59.8	53.8	66	...	0	...	...	...	
6.	E.	1	b	...	30.154	59.8	51.8	58	66.2	0	...	...	...	
8.	Variable.	1	b	...	30.187	58.8	53.8	71	...	0	...	...	...	
10.	E.	1	b	...	30.213	60.8	60.8	57	...	0	...	...	...	
Noon.	E.	2	b	...	30.171	70.3	59.8	52	...	0	...	...	...	
2.	E.	1	b	...	30.122	71.8	59.5	48	...	0	...	...	...	
4.	E.	2	b	...	30.112	70.8	59.8	50	...	0	...	...	...	
6.	Calm.	0	bm	...	30.127	65.3	57.3	59	66.0	1	Cir.	...	...	
8.	Calm.	0	b	...	30.168	63.8	57.8	67	...	0	...	...	...	
10.	Calm.	0	b	...	30.175	61.8	57.8	77	...	0	...	...	...	
Midt.	Calm.	0	b	...	30.171	61.8	58.3	79	...	0	...	...	...	
Totals.	...	8	bm	...	1902	773.6	85.8	757	...	...	...	...	...	
Mean.	E.	1		...	30.158	64.5	57.1	63	66.1	0	...	...	...	

## SUNDAY, 13TH.

2.	Calm.	0	b	...	30.163	61.3	58.3	82	...	0	...	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 77.5°, min. 59.5°.
4.	E.	1	b	...	30.156	61.8	58.8	82	...	0	...	...	...	
6.	E.	1	b	...	30.157	61.3	59.3	88	66.2	0	...	...	...	
8.	E.	2	bm	...	30.207	63.3	59.8	80	...	0	...	...	...	
10.	E.	2	bm	...	30.204	70.8	62.8	61	...	0	...	...	...	
Noon.	E.	1	bm	...	30.170	73.3	62.8	53	...	0	...	...	...	
2.	E.	1	bc	...	30.102	75.8	63.3	47	...	2	Cir.	...	...	
4.	E.	1	bc	...	30.097	71.3	60.8	52	...	4	Cir cum.	...	...	
6.	E.	1	bc	...	30.099	67.3	59.5	61	66.2	5	Cir cum.	...	...	
8.	E.	1	b	...	30.121	65.5	59.0	66	...	0	...	...	...	
10.	Calm.	0	bm	...	30.126	64.8	59.8	73	...	0	...	...	...	
Midt.	E.	1	bm	...	30.136	63.8	59.8	77	...	0	...	...	...	
Totals.	...	12	bcm	...	1738	89.3	4.0	822	...	11	Cir cum.	...	...	
Mean.	E.	1		...	30.145	66.7	60.3	68	66.2	1		...	...	

## MONDAY, 14TH.

2.	E.	1	b	...	30.115	64.8	57.8	63	...	0	...	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 82.5°, min. 63.0°.
4.	E.	2	b	...	30.091	64.8	56.8	59	...	0	...	...	...	
6.	E.	1	b	...	30.087	65.5	56.5	55	66.0	0	...	...	...	
8.	E.	1	b	...	30.106	68.3	58.3	52	...	0	...	...	...	
10.	E.	1	bc	...	30.143	74.3	61.8	47	...	2	Cir.	Cum.	...	
Noon.	E.	1	bc	...	30.104	78.3	65.3	47	...	2	...	Cum.	Cum.	
2.	E.	2	bc	...	30.081	80.8	65.8	41	...	3	Cir.	Cum.	Cum.	
4.	E.	1	bc	...	30.045	76.8	64.8	50	...	2	...	Cum.	Cum.	
6.	E.	2	bc	...	30.057	71.8	61.8	54	66.0	2	...	Cum.	Cum.	
8.	E.	1	b	...	30.084	69.8	62.8	65	...	0	...	...	...	
10.	E.	1	b	...	30.088	68.3	63.3	73	...	0	...	...	...	
Midt.	Calm.	0	b	...	30.095	67.8	63.3	75	...	0	...	...	...	
Totals.	...	14	bc	...	1096	851.3	18.3	681	...	11	Cir.	Cum.	...	
Mean.	E.	1		...	30.091	70.9	61.5	57	66.0	1			...	

TUESDAY, 15TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	1	bm	...	30.077	67.8	64.3	81	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, min. 66°5.
4.	Calm.	0	bm	...	30.068	67.8	63.8	78	...	0	...	...	
6.	E.	3	bme	...	30.073	67.3	62.8	75	66.0	5	...	Cum.&Str.	
8.	E.	2	be	...	30.107	70.8	64.8	69	...	5	...	Cum.&Cm	
10.	E.	3	be	...	30.124	71.5	65.8	70	...	5	...	Cum.	
Noon.	E.	2	be	...	30.081	72.3	66.0	68	...	8	...	Cum.	
2.	E.	3	be	...	30.040	70.3	66.3	78	...	7	...	Cum.	
4.	E.	3	be	...	30.033	69.8	65.8	78	...	8	...	Cum.&Cmst	
6.	E.	1	be	...	30.040	68.8	65.8	83	66.2	8	...	Cum.&Str.	
8.	E.N.E.	1	c	...	30.062	68.8	65.8	83	...	9	...	Cum.	
10.	E.	3	cd	...	30.071	68.5	64.3	77	...	10	...	Cum.	
Midd.	E.	2	c	...	30.064	68.8	64.5	77	...	7	...	Cum.	
Totals.	...	24		...	840	832.5	69.0	917	...	72	...		
Mean.	E.	2	bedm	...	30.070	69.4	65.0	76	66.1	6	...	Cum.&Str.	

WEDNESDAY, 16TH.

2.	E.	5	bcq	...	30.055	68.8	65.8	83	...	6	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 77°7.
4.	E.	2	c	...	30.056	67.8	64.8	83	...	7	...	Cum.	
6.	E.	4	cqp	...	30.066	66.3	64.8	91	66.0	10	...	Cum.	
8.	E.	2	be	...	30.110	67.8	65.3	85	...	6	Cir cum.	Cum.&Str.	
10.	E.	2	be	...	30.128	69.8	66.8	83	...	9	...	Cum.&Cm	
Noon.	E.	3	be	...	30.088	72.8	68.8	79	...	9	...	Cum.	
2.	E.	2	be	...	30.039	75.3	69.8	72	...	9	...	Cum.	
4.	F.	1	be	...	30.031	74.5	69.8	75	...	8	Cir.	Cum.	
6.	Calm.	0	be	...	30.037	70.8	67.8	83	66.5	9	...	Cum.&Cm	
8.	E.	1	be	...	30.072	69.8	67.8	88	...	9	Str.	Cum.	
10.	Variable.	1	be	...	30.089	68.8	67.8	94	...	9	Cir cum.	Cum.	
Midd.	Calm.	0	c	...	30.069	68.8	67.8	94	...	10	...	Cum.&Str.	
Totals.	...	23		...	861	1.3	87.1	1010	...	101	...		
Mean.	E.	2	bcqp	...	30.072	70.1	67.3	84	66.2	8	Cir cum.	Cum. & Str.	

THURSDAY, 17TH.

2.	Calm.	0	c	...	30.076	69.5	67.5	88	...	8	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 87°, min. 65°5.
4.	Calm.	0	oc	...	30.070	68.5	67.5	94	...	10	...	Cum.	
6.	Calm.	0	be	...	30.074	68.5	67.8	95	66.5	9	...	Cum.&Str.	
8.	w.	1	be	...	30.114	69.8	68.8	94	...	7	...	Cum.	
10.	Calm.	0	be	...	30.120	73.8	70.8	84	...	7	Cir.	Cum.	
Noon.	Calm.	0	be	...	30.079	78.3	73.8	77	...	4	Cir.	Cum.	
2.	E.	1	be	...	30.021	81.3	77.8	83	...	3	Cir str.	...	
4.	E.	1	be	...	30.015	83.8	73.5	56	...	2	Cir.	...	
6.	Calm.	0	be	...	30.028	74.8	69.3	72	67.0	2	Str.	...	
8.	Calm.	0	be	...	30.079	72.8	68.8	79	...	8	...	Cum.	
10.	E.	1	be	...	30.094	71.8	68.5	83	...	8	...	Cum.	
Midd.	E.	4	c	...	30.097	70.5	68.0	85	...	10	...	Cum.	
Totals.	...	8		...	867	883.4	2.1	990	...	78	...		
Mean.	Variable.	1	be	...	30.072	73.6	70.2	83	66.7	6	Cir str.	Cum.	

## FRIDAY, 18TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 6 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	2	qm	...	30.099	67.8	65.8	88	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, min. 64° 5.
4.	E.	5	qm	...	30.095	66.8	64.8	88	...	10	...	Cum.	
6.	E.	3	om	...	30.098	65.8	64.3	91	66.5	10	...	Nimb.	
8.	E. S.	5	om	...	30.151	65.8	64.3	91	...	10	...	Nimb.	
10.	E. S.	4	om	...	30.158	66.3	63.8	85	...	10	...	Cum.	
Noon.	E.	5	c	...	30.139	67.3	64.8	85	...	8	...	Cum.	
2.	E.	3	be	...	30.061	69.3	65.8	81	...	9	...	Cum.	
4.	E.	4	be	...	30.050	67.8	64.8	83	...	8	...	Cum.	
6.	...	...	...	...	...	66.8	63.3	81	66.2	...	...	...	
8.	E.	4	be	...	30.069	66.8	64.8	88	...	7	...	Cum.	
10.	E.	2	be	...	30.065	66.8	64.8	88	...	9	...	Cum.	
Milt.	E.	2	be	...	30.058	66.8	64.8	88	...	9	Str.	Cum.	
Totals.	...	30	om & be	...	1043	84.1	56.1	77	...	100	...	Cum. & Nimb.	
Mean.	E.	4	...	...	30.095	67.0	64.7	86	66.4	9	...	...	

## SATURDAY, 19TH.

2.	E.	3	be	...	30.032	66.5	64.5	88	...	8	...	Cum.	At Hong Kong.
4.	E.	4	be	...	30.026	66.5	64.8	89	...	9	...	Cum.	
6.	E.	1	be	...	30.076	66.3	64.8	91	66.2	9	...	Cum.	
8.	E.	2	be	...	30.054	67.3	65.3	88	...	7	Cir.	Cum.	
10.	E.	4	be	...	30.077	68.3	66.3	88	...	7	Cir.	Cum.	
Noon.	E. S.	2	be	...	30.055	69.3	67.3	88	...	6	Cir.	Cum.	
2.	E.	3	be	...	30.013	70.8	68.8	88	...	9	Cir cum.	Cum.	
4.	E.	2	be	...	29.993	70.8	68.3	85	...	8	Cir cum.	Cum.	
6.	E.	1	be	...	29.962	69.0	67.8	93	67.0	4	Cir cum.	Cum.	
8.	E.	2	be	...	30.025	68.8	67.8	94	...	5	Cir cum.	Cum.	
10.	E.	1	be	...	30.031	67.8	67.0	95	...	1	...	Cum.	Cum. & Str.
Milt. Variable.	...	1	be	...	30.048	67.8	67.3	97	...	2	Cir.	Cum. & Str.	
Totals.	...	26	be	...	422	99.2	80.0	1081	...	75	Cir. & Cir cum.	Cum.	
Mean.	E.	2	...	...	30.035	68.3	66.7	90	66.6	6	...	...	

## SUNDAY, 20TH.

2.	E.	4	be	...	30.039	66.8	66.8	100	...	6	Str.	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 77° 5, min. 65°.
4.	E.	2	hem	...	30.026	67.3	67.3	100	...	5	...	Cum.	
6.	E.	1	ew	...	30.048	68.3	67.8	97	66.7	10	...	Cum.	
8.	E.	1	e	...	30.076	68.8	67.8	94	...	9	...	Cum.	
10.	E.	2	be	...	30.079	73.8	70.8	84	...	8	Cir cum.	Cum.	
Noon.	E.	1	be	...	30.047	73.8	70.3	82	...	7	...	Cum.	
2.	Variable.	1	be	...	29.984	75.3	72.3	84	...	5	Cir cum.	Cum.	
4.	w.	2	e	...	29.975	72.8	70.8	89	...	9	...	Cum. & Nib.	
6.	w.	1	e	...	29.985	71.3	69.8	91	67.0	9	...	Cum.	
8.	w.	1	be	...	30.012	71.3	69.8	91	...	1	...	Cum.	
10.	w. & w.	2	be	...	30.026	71.3	69.3	88	...	8	...	Cum.	Cum.
Milt.	w.	1	be	...	30.045	69.8	67.8	88	...	9	...	Cum.	
Totals.	...	19	hem	...	342	10.6	110.6	1088	...	86	Str. & Cir cum.	Cum.	
Mean. Variable.	...	2	...	...	30.028	70.9	69.2	91	66.8	7	...	...	

## MONDAY, 21st DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N.W.	1	bc	...	30.040	68.8	66.3	85	...	9	...	Cum. & Str.	At Hong Kong. Temperature by self-registering thermometer, max. 76°, min. 66°.
4.	W.	1	c	...	30.024	67.8	65.8	78	...	9	...	Cum.	
6.	Cal.	0	c	...	30.052	67.8	64.8	83	67.0	9	...	Str.	
8.	Cal.	0	bc	...	30.120	67.5	62.8	74	...	9	...	Cum.	
10.	E.	1	bc	...	30.137	68.8	62.5	67	...	8	...	Cir.	
Noon.	E.	2	bc	...	30.105	71.8	65.5	68	...	2	...	Str.	
2.	E.	1	b	...	30.051	73.3	66.3	66	...	0	...	...	
4.	E.	2	b	...	30.055	72.8	66.3	68	...	0	...	...	
6.	E.	2	bc	...	30.063	69.3	65.8	81	67.0	7	...	Cum.	
8.	E.	1	c	...	30.102	67.8	65.8	88	...	10	...	Cum.	
10.	E.	2	c	...	30.107	67.8	65.8	88	...	10	...	Cum.	
Midt.	E.	3	bc	...	30.117	66.8	65.8	94	...	8	...	Cir.	Cum.
Totals.	...	16	bc	...	.973	110.3	61.5	940	...	81	Cir. & Str.	Cum & Str.	
Mean.	E.	1		...	30.081	69.2	65.1	78	67.0	7			

## TUESDAY, 22d.

2.	E.	2	c	...	30.107	66.8	64.8	88	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 70° 5', min. 64° 0'.
4.	E.	3	c	...	30.097	66.8	63.8	83	...	10	...	Cum.	
6.	E.	2	c	...	30.121	65.8	62.0	79	67.0	10	...	Cum.	
8.	E.	3	c	...	30.153	65.3	60.8	76	...	10	...	Cum.	
10.	E.	2	c	...	30.186	65.8	61.8	78	...	9	...	Cum.	
Noon.	E.	3	c	...	30.161	66.3	62.3	78	...	10	...	Cum.	
2.	E.	2	bc	...	30.120	66.3	61.8	76	...	5	...	Cir.	
4.	E.	6	bc	...	30.077	67.8	64.3	80	...	5	...	Cir str.	
6.	E.	4	c	...	30.095	67.0	64.5	85	66.7	10	...	Cum.	
8.	E.	3	c	...	30.146	66.3	64.3	88	...	10	...	Cum.	
10.	E.	3	c	...	30.161	65.3	62.8	85	...	10	...	Cum.	
Midt.	E.	4	c	...	30.164	65.3	62.8	85	...	10	...	Cum.	
Totals.	...	37	c	...	.1588	74.8	36.0	21	...	109	Cir str.	Cum.	
Mean.	E.	3		...	30.132	66.2	63.0	82	66.8	9			

## WEDNESDAY, 23d.

2.	E.	5	eq	...	30.153	64.8	62.8	88	...	10	...	Nimb.	At Hong Kong. Temperature by self-registering thermometer, max. 69°, min. 63° 2'.
4.	E.	5	c	...	30.138	64.3	62.3	88	...	9	...	Cum.	
6.	E.	3	c	...	30.149	64.3	62.8	91	66.5	9	...	Cum.	
8.	E.	4	c	...	30.154	65.3	63.8	91	...	9	...	Cum.	
10.	E.	4	c	...	30.180	66.3	63.8	85	...	10	...	Cum.	
Noon.	E.	5	equ	...	30.161	65.8	63.8	88	...	10	...	Cum.	
2.	E.	5	equ	...	30.101	65.8	64.5	93	...	10	...	Cum.	
4.	E.	4	equ	...	30.073	66.5	64.5	88	...	10	...	Cum.	
6.	E.	5	c	...	30.083	66.3	64.3	88	66.0	10	...	Cum.	
8.	E.	2	eq	...	30.083	67.3	64.8	85	...	10	...	Cum.	
10.	E.	5	eq	...	30.083	67.0	65.5	91	...	9	...	Cum.	
Midt.	E.	3	eq	...	30.080	66.3	65.0	93	...	10	...	Cum.	
Totals.	...	50	equ	...	.1448	70.0	47.0	1069	...	116	...	Cum.	
Mean.	E.	4		...	30.121	65.8	64.0	89	66.2	10			

## THURSDAY, 24TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	4	ci	...	30.072	66.3	64.8	91	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 71, min. 61.5.
4.	E.	3	ci	...	30.051	66.3	65.3	91	...	10	...	Cum.	
6.	E.	3	ci	...	30.047	66.8	65.8	94	66.5	10	...	Cum.	
8.	E.N.E.	1	e	...	30.083	67.5	65.8	89	...	10	...	Cum.	
10.	E.	1	o	...	30.072	69.5	67.8	89	...	10	...	Cum.	
Noon.	E.	2	o	...	30.024	70.8	68.5	87	...	10	...	Cum.	
2.	E.	1	o	...	29.972	70.8	68.3	85	...	10	...	Cum.	
4.	E.	1	o	...	29.945	69.3	67.8	91	...	10	...	Cum.	
6.	E.	1	o	...	29.962	68.8	67.8	94	66.7	10	...	Cum.	
8.	F.	1	od	...	29.960	68.8	67.3	91	...	10	...	Cum.	
10.	F.	1	op	...	29.989	67.8	67.0	95	...	10	...	Cm.&Nb.	
Midd.	E.	1	od	...	29.978	66.8	66.8	100	...	10	...	Cm.&Nb.	
Totals.	...	23	...	...	164	99.5	83.0	20	...	...	...	Cm.&Nb.	
Mean.	E.	2	...	...	30.014	68.3	66.9	92	66.6	10	...	Cm.&Nb.	

## FRIDAY, 25TH.

2.	E.	1	od	...	29.974	66.8	66.8	100	...	10	...	Cm.&Nb.	At Hong Kong. Temperature by self-registering thermometer, max. 68, min. 60.7.
4.	W.	4	cpd	...	29.978	62.8	62.3	97	...	10	...	Cum.	
6.	N.	2	e	...	29.987	62.5	61.8	96	66.7	10	...	Cum.	
8.	N.	1	e	...	30.013	60.3	59.8	97	...	10	...	Cum.	
10.	N.	1	e	...	30.050	61.8	59.5	85	...	9	...	Cm.&Str.	
Noon.	N.	1	e	...	30.014	64.3	60.8	80	...	9	...	Cm.&Str.	
2.	Calm.	0	e	...	29.941	66.8	62.3	75	...	9	...	Cm.&Str.	
4.	N.	1	e	...	29.934	64.8	60.5	76	...	10	...	Cum.	
6.	Calm.	0	e	...	29.937	63.5	60.3	81	66.5	10	...	Cum.	
8.	Calm.	0	e	...	29.973	61.8	58.3	80	...	9	...	Cum.	
10.	Calm.	0	e	...	29.976	60.8	57.8	82	...	10	...	Cm.&Str.	
Midd.	N.E.	1	e	...	29.981	60.8	57.8	82	...	10	...	Cm.&Str.	
Totals.	...	12	...	...	1175.8	37.0	7.8	71	...	116	...	Cm.&Str.	
Mean. Variable.	1	...	...	...	29.980	63.1	60.6	86	66.6	10	...	Cm.&Str.	

## SATURDAY, 26TH.

2.	W.N.W.	1	o	...	29.976	60.2	58.0	87	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 62, min. 58.
4.	W.N.W.	1	e	...	29.963	59.8	57.8	88	...	10	...	Cm.&Str.	
6.	Calm.	0	e	...	29.968	60.3	58.3	88	66.5	10	...	Cum.	
8.	E.	1	e	...	29.994	59.8	58.8	94	...	10	...	Cum.	
10.	E.	2	o	...	30.020	59.8	58.8	94	...	10	...	Cum.	
Noon.	E.	1	od	...	29.982	59.8	58.8	94	...	10	...	Cum.	
2.	E.	1	e	...	29.938	60.3	59.3	94	...	10	...	Cm.&Str.	
4.	E.	1	e	...	29.934	61.5	60.3	93	...	10	...	Cm.&Str.	
6.	E.	1	o	...	29.969	61.8	59.8	88	66.9	10	...	Cum.	
8.	Calm.	0	o	...	29.993	61.8	60.3	91	...	10	...	Str.	
10.	N.W.	2	oc	...	30.039	60.8	59.8	94	...	10	...	Cm.&Str.	
Midd.	N.W.	3	oc	...	30.057	59.8	58.3	91	...	10	...	Cm.&Str.	
Totals.	...	14	...	...	1183.3	5.7	108.3	16	...	...	...	Cm.&Str.	
Mean. Variable.	1	...	...	...	29.986	60.5	59.0	91	66.2	10	...	Cm.&Str.	

## SUNDAY, 27TH DECEMBER 1874.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Clouds, 0 to 10.	Upper.	Lower.
2.	Calm.	0	oe	...	30.068	58.8	57.8	94	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 70°, min. 55°.
4.	N.	1	oe	...	30.067	58.8	57.3	91	...	10	...	Cum.	
6.	N.	12	e	...	30.093	56.8	53.8	81	66.2	10	...	Cum.	
8.	N.	1	be	...	30.159	56.8	53.5	80	...	8	...	Cm.&Str.	
10.	Variable.	1	be	...	30.171	64.5	58.0	65	...	4	...	Cm.&Str.	
Noon.	N.	3	be	...	30.154	64.8	58.8	68	...	1	...	Cm.	
2.	N.	12	be	...	30.121	64.8	57.8	63	...	4	Cir str.	...	
4.	N.	3	be	...	30.146	60.3	54.8	69	...	7	...	Cum.	
6.	N.	3	e	...	30.171	57.3	52.8	73	66.0	10	...	Cum.	
8.	N.	4	e	...	30.225	54.8	51.8	81	...	10	...	Cm.&Str.	
10.	N.E.	3	e	...	30.238	54.3	50.8	77	...	8	...	Cm.&Str.	...
Midt.	N.E.	2	be	...	30.239	53.3	50.3	80	...	8	...	Cm.&Str.	
Totals.	...	25	...	...	1852	15.3	57.5	922	...	90	...	...	
Mean.	N.E.	2	be	...	30.154	58.8	54.8	77	66.1	7	Cir str.	Cm.&Str.	

## MONDAY, 28TH.

2.	N.N.W.	3	oe	...	30.230	52.8	49.8	80	...	10	...	Cm.&Str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 65°5, min. 51°5.
4.	W.N.W.	1	oe	...	30.238	52.8	49.3	77	...	10	...	Cm.&Str.	
6.	Calm.	0	e	...	30.245	52.8	49.8	80	65.5	10	...	Cm.&Str.	
8.	N.E.	1	e	...	30.311	53.8	50.8	80	...	10	...	Cm.&Str.	
10.	N.N.E.	1	e	...	30.308	55.3	52.3	81	...	10	...	Cm.&Str.	
Noon.	N.E.	2	be	...	30.248	59.3	55.3	76	...	5	Str.	Cum.	
2.	E.	1	be	...	30.169	62.3	56.8	70	...	7	...	Cum.	
4.	E.	2	be	...	30.156	63.8	58.3	70	...	3	...	Cum.	
6.	W.	1	be	...	30.151	59.5	56.0	79	65.5	7	...	Cum.	
8.	Calm.	0	be	...	30.183	58.3	55.3	81	...	5	...	Cum.	
10.	W.	1	e	...	30.183	57.8	54.8	81	...	10	...	Cum.	...
Midt.	E.	1	be	...	30.157	57.8	54.8	81	...	3	Str.	Cum.	
Totals.	...	14	...	...	2579	86.3	43.3	96	...	90	...	...	
Mean.	Variable.	1	be	...	30.215	57.2	53.6	78	65.5	8	Str.	Cum. & Cum str.	

## TUESDAY, 29TH.

2.	E.	2	be	...	30.117	58.8	55.5	81	...	4	...	Cm.&Str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 64°5, min. 53°7.
4.	E.	1	e	...	30.109	58.8	56.0	83	...	9	...	Cm.&Str.	
6.	E.	1	be	...	30.130	58.3	56.3	87	65.5	9	...	Cm.&Str.	
8.	E.	1	od	...	30.176	58.8	55.8	82	...	10	...	Str.	
10.	N.E.	2	o	...	...	59.8	56.8	82	...	10	...	Cum.	
Noon.	N.E.	2	o	...	30.118	60.3	57.3	82	66.2	10	...	Cum.	
2.	N.E.	1	o	...	30.063	62.8	58.8	77	65.5	10	...	Cum.	
4.	N.E.	1	o	...	30.069	62.3	58.8	80	65.5	10	...	Cum.	
6.	E.	1	e	...	30.107	61.8	59.3	84	65.0	10	...	Cm.&Str.	
8.	Calm.	0	e	...	30.120	61.8	59.3	85	...	10	...	Cum.	...
10.	Calm.	0	od	...	30.159	60.8	58.8	88	...	10	...	Cum.	
Midt.	Calm.	0	o	...	30.166	59.8	58.3	91	...	10	...	Cum.	
Totals.	...	13	...	...	1334	4.8	91.5	42	27.7	112	...	...	Cm.&Str.
Mean.	E.N.E.	1	odp	...	30.121	60.4	57.6	84	65.5	9	...	...	

## WEDNESDAY, 30th DECEMBER 1871.

Hour.	Wind.		Weather.	State of Sky. 0 to 5.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity. Sat. Temp.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	od	...	30.157	60.0	58.8	93	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 69°, min. 58° 5.
4.	Calm.	0	od	...	30.140	60.3	58.8	91	...	10	...	Cum.	
6.	Calm.	0	oe	...	30.153	60.8	59.8	91	65.0	10	...	Cum.	
8.	Calm.	0	oecl	...	30.212	61.8	60.3	91	...	10	...	Cum.	
10.	Calm.	0	oe	...	30.228	63.8	61.3	85	...	10	...	Cm.&Str.	
Noon.	Calm.	0	o	...	30.174	66.5	63.5	83	...	9	...	Str.	
2.	Calm.	0	e	...	30.140	67.8	63.8	78	...	10	...	Cm.&Str.	
4.	Calm.	0	e	...	30.144	65.5	62.0	81	...	10	...	Cum.	
6.	S.	1	e	...	30.204	65.8	60.8	73	65.0	10	...	Cum.	
8.	S.	1	o	...	30.236	63.3	58.8	75	...	10	...	Cum.	
10.	Calm.	0	o	...	30.240	62.8	58.8	77	...	10	Str.	Cum.	
Midt.	E.	1	o	...	30.258	61.3	57.8	79	...	10	...	Cm.&Str.	
Totals.	...	...	...	...	32306	39.7	4.5	1000	...	119	...	...	Str. Cum. & Str.
Mean.	Calm.	0	...	...	30.192	63.3	60.4	83	65.0	10	...	...	

## THURSDAY, 31st.

2.	S.E.	1	o	...	30.254	60.0	56.8	81	...	10	...	Cum.	At Hong Kong. Temperature by self-registering thermometer, max. 67° 2, min. 55° 2.
4.	S.E.	1	be	...	30.245	58.8	55.3	79	...	8	...	Cir.	
6.	S.E.	2	e	...	30.254	57.5	54.5	81	65.0	10	...	Cm.&Str.	
8.	S.E.	1	e	...	30.269	56.8	54.3	84	...	8	...	Cir.	
10.	S.E.	2	oe	...	30.317	60.8	56.8	77	...	10	...	Cum.	
Noon.	Variable.	1	be	...	30.264	64.8	59.8	73	...	9	Cir cum.	Cum.	
2.	S.E.	1	e	...	30.241	65.8	59.0	65	...	9	...	Cum.	
4.	S.E.	1	e	...	30.228	61.8	56.8	72	...	10	...	Cm.&Str.	
6.	S.E.	2	o	...	30.264	60.5	55.5	71	65.0	10	...	Cm.&Str.	
8.	S.E.	1	o	...	30.284	59.3	54.8	74	...	10	...	Cm.&Str.	
10.	S.	1	o	...	30.295	58.3	54.3	76	...	10	...	Cm.&Str.	
Midt.	S.	2	od	...	30.392	56.8	53.3	78	...	10	...	Str.	Str. Cum & Str.
Totals.	...	16	...	...	3247	721.2	71.2	911	...	114	Cir. & Cir cum.	...	
Mean.	S.E. & S.	1	...	...	30.271	60.1	55.9	76	65.0	9	...	...	

## FRIDAY, 1st JANUARY 1875.

2.	S.N.E.	1	o	...	30.297	56.8	53.0	78	...	10	...	Str.	At Hong Kong. Temperature by self-registering thermometer, max. 73° 2, min. 54° 5.
4.	S.N.E.	2	o	...	30.291	56.8	53.0	76	...	10	...	Str.	
6.	S.	1	o	...	30.280	55.0	51.8	80	64.2	10	...	Str.	
8.	S.E.	0	...	...	30.333	54.8	51.8	81	...	...	...	...	
10.	S.E.	1	b	...	30.334	61.8	56.8	72	...	0	...	...	
Noon.	E.	1	b	...	30.263	65.8	59.8	68	...	0	...	...	
2.	Calm.	0	b	...	30.193	68.3	60.5	61	...	0	...	...	
4.	W.	1	b	...	30.194	67.8	60.8	64	...	0	...	...	
6.	Calm.	0	bm	...	30.226	61.3	56.8	75	...	0	...	...	
8.	Calm.	0	bm	...	30.272	60.8	56.8	77	...	0	...	...	
10.	Calm.	0	bm	...	30.273	59.8	56.0	77	...	0	...	...	
Midt.	Calm.	0	bm	...	30.280	59.8	56.8	82	...	0	...	...	Str.
Totals.	...	7	...	...	3266	8.8	73.9	891	...	30	...	...	
Mean.	Variable.	1	o & bm	...	30.272	60.7	56.2	74	64.2	3	...	...	

## SATURDAY, 2D JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bem	...	30.264	59.3	56.3	82	...	4	...	Cum.	At Hong Kong. Temperature by self-registering thermo- meter, max. 73°, min. 54° 2.
4.	E.	1	bem	...	30.267	58.8	55.3	79	...	8	...	Cum.	
6.	Calm.	0	b	...	30.270	56.8	53.8	81	64.5	0	...	...	
8.	Calm.	0	b	...	30.300	60.8	56.3	75	...	0	...	...	
10.	Calm.	0	bc	...	30.302	61.8	57.3	74	...	3	Cir.	Cum.	
Noon.	w.	1	bc	...	30.239	63.8	57.8	67	...	3	Cir.	Str.	
2.	w.	1	bem	...	30.180	64.8	58.0	64	...	2	...	Str.	
4.	E.S.E.	1	bem	...	30.156	67.8	60.8	64	...	2	...	Str.	
6.	S.E.	1	bem	...	30.190	68.3	60.8	62	64.5	1	...	Str.	
8.	N.	1	b	...	30.218	62.8	56.8	67	...	0	...	...	
10.	N.	2	b	...	30.219	61.8	55.8	67	...	0	...	...	
Midt.	N.	3	bc	...	30.230	60.8	55.8	72	...	2	...	Str.	
Totals.	...	11	...	...	2835	27.6	84.8	854	...	25	...	...	
Mean.	Variable.	1	bem	...	30.236	62.3	57.1	71	64.5	2	Cir.	Cum. & Str.	

## SUNDAY, 3d.

2.	N.	1	bq	...	30.202	59.5	54.0	68	...	3	...	Str.	At Hong Kong. Temperature by self-registering thermo- meter, max. 77°, min. 54° 7.
4.	N.	3	bq	...	30.199	58.5	54.0	74	...	3	...	Str.	
6.	N.	1	bq	...	30.217	56.8	52.8	75	64.0	0	...	...	
8.	N.	3	bq	...	30.260	58.8	53.8	71	...	0	...	...	
10.	N.	1	bq	...	30.267	62.3	54.3	58	...	0	...	...	
Noon.	N.	3	bq	...	30.232	66.3	56.8	55	...	0	...	...	
2.	N.E.	1	bq	...	30.178	72.8	61.3	50	...	0	...	...	
4.	N.E.	3	bq	...	30.155	68.8	58.8	53	...	0	...	...	
6.	N.	1	bq	...	30.168	63.5	54.5	55	64.2	2	...	Str.	
8.	N.	2	bc	...	30.179	61.8	52.8	54	...	2	...	Str.	
10.	N.	2	b	...	30.193	60.3	51.8	56	...	0	...	...	
Midt.	Calm.	0	b	...	30.166	57.8	51.3	63	...	0	...	...	
Totals.	...	21	bq	...	2416	27.2	56.2	732	...	10	...	Str.	
Mean.	N.E.	2	...	...	30.201	62.3	54.7	61	64.1	1	...	...	

## MONDAY, 4TH.

2.	N.N.W.	2	b	...	30.150	56.8	50.8	65	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 75° 5, min. 52° 2.
4.	N.N.W.	1	b	...	30.154	55.8	50.3	69	...	0	...	...	
6.	N.E.	1	bem	...	30.148	53.8	49.8	74	64.0	1	Cir. & Cum.	...	
8.	N.E.	2	bc	...	30.177	55.8	50.8	70	...	3	Cir cum.	...	
10.	N.E.	1	bc	...	30.179	61.8	53.8	58	...	2	...	Cum.	
Noon.	N.	0	b	...	30.133	66.8	56.8	52	...	0	...	...	
2.	E.	1	bc	...	30.083	71.3	59.8	49	...	2	Str.	...	
4.	Calm.	0	b	...	30.054	69.3	57.8	49	...	0	...	...	
6.	N.	1	b	...	30.059	63.8	55.3	57	63.7	0	...	...	
8.	N.	0	bm	...	30.073	61.5	54.0	60	...	0	...	...	
10.	N.	1	b	...	30.089	59.8	52.3	60	...	0	...	...	
Midt.	N.	1	b	...	30.093	58.3	51.3	61	...	0	...	...	
Totals.	...	11	bem	...	1392	14.8	42.8	724	...	8	Cir cum. & Str.	Cum.	
Mean.	N.E.	1	...	...	30.116	61.2	53.6	60	63.8	1	...	...	

## TUESDAY, 5th JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.	1	b	...	30.102	56.8	50.8	65	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 73.5, min. 53.7.
4.	E.	1	b	...	30.089	55.8	50.8	70	...	0	...	...	
6.	N.	1	b	...	30.123	54.8	48.8	65	63.0	0	...	...	
8.	N.	1	b	...	30.166	57.3	52.3	70	...	0	...	...	
10.	Caln.	0	b	...	30.179	59.0	52.3	62	...	0	...	...	
Noon.	N.S.W.	1	b	...	30.136	63.5	55.0	57	...	0	...	...	
2.	N.S.W.	1	b	...	30.096	66.8	57.8	56	...	0	...	...	
4.	N.S.W.	1	b	...	30.110	70.8	60.3	52	...	0	...	...	
6.	N.	1	b	...	30.147	62.8	55.3	61	63.5	0	...	...	
8.	N.E.	1	b	...	30.167	60.8	55.3	60	...	0	...	...	
10.	Caln.	0	b	...	30.183	59.5	52.3	60	...	0	...	...	
Midd.	N.E.	2	b	...	30.188	58.8	52.0	62	...	0	...	...	
Totals.	...	11		...	1686	6.7	41.0	740	...	0			
Mean.	N <sup>h</sup> E.	1		...	30.140	60.6	53.4	62	63.2	0			

## WEDNESDAY, 6th.

2.	N.	1	b	...	30.192	56.8	50.8	65	...	0	...	...	At Hong Kong. Temperature by self-registering thermo- meter, max. 67, min. 53.
4.	Caln.	0	b	...	30.196	55.8	49.8	65	...	0	...	...	
6.	N.E.	1	bm	...	30.206	54.3	48.8	67	63.0	0	...	...	
8.	N.E.	1	bm	...	30.261	58.3	53.3	71	...	0	...	...	Noon, left Hong Kong for Manila.
10.	Caln.	0	bm	...	30.283	61.8	54.8	62	...	0	...	...	
Noon.	Caln.	0	b	...	30.244	63.3	54.8	57	...	0	...	...	
2.	E.	2	bm	...	30.197	61.5	55.0	65	62.7	0	...	...	Midnight, sea rising.
4.	N <sup>h</sup> E.	3	bcm	...	30.186	60.8	55.3	70	62.7	1	...	Cum.	
6.	E.N.E.	3	bcm	...	30.195	61.0	56.3	73	64.5	3	...	Cum.	
8.	E.N.E.	3	bc	...	30.207	61.3	55.8	70	67.0	4	...	Cum.	
10.	E.N.E.	5	bcm	3	30.185	62.3	58.3	77	68.0	5	...	Cum.	
Midd.	E.N.E.	6	bcmq	4	30.183	62.8	58.3	75	68.5	4	...	Cum.	
Totals.	...	25		7	2585	0.0	51.3	817	36.4	17			Cum.
Mean.	N <sup>h</sup> E.	2	bcmq	3	30.211	60.0	54.3	68	65.2	1			

## THURSDAY, 7th.

2.	N.E.	4	e	...	30.139	64.3	60.5	78	69.0	9	...	Cum.	At noon, lat. 20° 16' N. long. 115° 41' E. Temperature by self-registering thermo- meter, max. 72, min. 69.
4.	N.E.	5	e	...	30.124	64.8	60.8	78	70.0	10	...	Cum.	
6.	N.E.	4	e	3	30.120	65.0	62.8	87	72.2	9	...	Cum.	
8.	N.E.	5	cp	3	30.174	65.3	64.3	94	72.0	10	...	Cum.	Current, s. 53° w. 30'.  Sp. gr. 1.02559.
10.	N.E.	4	cp	3	30.157	66.8	65.3	91	72.0	9	Cir.	Cum.	
Noon.	N.E.	5	cp	...	30.116	68.8	66.8	88	72.5	8	Cir.	Cum.	
2.	N.E.	5	bcp	4	30.031	69.3	67.8	91	72.7	9	...	Cum.	
4.	N.E.	5	bc	5	30.026	70.3	69.0	92	73.5	9	...	Cum.	
6.	N <sup>h</sup> E.	6	e	4	30.009	71.3	69.3	88	73.2	10	...	Cum.	
8.	E.N.E.	5	bcpm	3	30.037	71.8	69.8	89	73.0	7	...	Cum.	
10.	E.N.E.	4	cpm	4	30.046	72.3	69.8	87	73.0	10	...	Cum.	
Midd.	E <sup>h</sup> N.	5	...	...	30.031	72.8	70.3	86	73.0	...	...	Cum.	
Totals.	...	57		29	680	102.8	76.5	1049	26.1	100			Cir. Cum.
Mean.	N <sup>h</sup> E.	5	cpm	4	30.082	68.6	66.4	87	72.2	9			

## FRIDAY, 8TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	4	bcm	3	29.985	71.5	70.3	93	73.2	8	...	Cum str.	At noon, lat. 17° 54' N. long. 117° 13' E. Temperature by self-registering thermometer, max. 77° 5, min. 70° 5. Current, s. 36° W. 26'. Sp. gr. 1.02550.
4.	E.N.E.	6	orm	4	29.958	72.3	70.5	90	73.2	10	...	Cum str.	
6.	E.N.E.	5	bew	...	29.940	73.0	71.3	91	73.2	9	...	Cum.	
8.	E.N.E.	6	be	...	29.941	73.8	71.8	89	74.0	4	...	Cum.	
10.	E.N.E.	4	be	4	29.947	75.0	72.8	88	75.0	7	...	Cir.	
Noon.	E.N.E.	3	be	4	29.921	76.0	73.8	88	75.2	4	...	Cir.	
2.	N.E.	3	be	...	29.906	76.8	74.8	89	75.2	5	...	Cir.	
4.	N.E.	3	be	...	29.902	76.0	73.8	88	75.0	6	...	Cir.	
6.	E.N.E.	3	be	...	29.909	74.8	73.3	91	75.0	4	...	Cum.	
8.	E.N.E.	3	be	...	29.916	74.8	73.3	91	75.0	4	...	Cum.	
10.	E.N.E.	3	bcmw	...	29.927	73.8	72.8	94	75.0	2	...	Cum.	
Midt.	E.N.E.	2	bmw	...	29.920	73.8	73.0	95	75.0	0	...	...	
Totals.	...	45		15	1117.2	51.6	31.5	7	54.0	63		Cir.	Cum & Cum str.
Mean.	E.N.E.	4	bcmw	4	29.931	74.3	72.6	91	74.5	5			

## SATURDAY 9TH.

2.	E.N.	2	be	2	29.907	73.8	71.8	89	75.0	3	...	Cum.	At noon, lat. 16° 35' N. long. 117° 47' E. Temperature by self-registering thermometer, max. 80°, min. 72°. Current, s. 45° W. 11'. 3.15 A.M., observed a bright meteor in Virginia. Sp. gr. 1.02520.
4.	E.N.	1	be	1	29.904	73.8	72.8	94	75.0	2	...	Cir.	
6.	E.N.	2	be	1	29.921	73.8	73.3	97	75.2	2	...	Cir cum.	
8.	E.	3	be	1	29.957	74.3	73.8	97	75.2	3	...	Cum.	
10.	E.	2	be	1	29.961	76.8	75.5	92	76.0	1	...	Cum. & Str.	
Noon.	E.	3	be	1	29.929	76.8	74.8	89	76.5	1	...	Cum. & Str.	
2.	E.	1	be	...	29.904	76.8	76.3	87	77.5	1	...	Cir.	
4.	E.	1	b	...	29.903	76.8	76.3	87	77.8	0	...	...	
6.	Variable.	0	be	1	29.932	77.3	75.5	90	...	2	...	Cir str.	
8.	N.E.N.	1	be	...	29.951	76.3	75.0	93	76.5	0	...	...	
10.	N.E.N.	1	be	...	29.954	75.8	75.0	95	76.5	2	...	Str.	
Midt.	N.E.	2	be	...	29.958	75.8	75.3	97	76.5	5	...	Cum.	
Totals.	...	19		8	1118.1	72.1	55.4	27	67.7	22		Cir.	Cum. & Str.
Mean.	E.N.E.	2	be	1	29.932	76.0	74.6	92	76.2	2			

## SUNDAY 10TH.

2.	N.E.	3	bew	1	29.945	75.8	74.8	94	76.0	8	...	Cum. & Str.	At noon, lat. 15° 29' N. long. 119° 27' E. Temperature by self-registering thermometer, max. 82°, min. 74° 7. Current, s. 31° W. 6'. Black bulb in sun 132°. Sp. gr. 1.02505.
4.	N.E.	2	be	1	29.932	75.8	73.8	89	78.5	6	...	Cum.	
6.	N.E.	2	be	1	29.950	76.8	75.3	91	78.0	4	...	Cum.	
8.	N.E.	2	be	...	29.989	77.8	76.3	92	78.5	2	...	Cir str.	
10.	N.	1	be	1	29.949	77.8	76.3	91	78.8	1	...	Cir str.	
Noon.	N.	1	be	1	29.928	79.5	77.8	92	79.5	1	...	Cir str.	
2.	N.W.P.	1	be	...	29.885	81.8	78.8	85	80.2	2	...	Cir.	
4.	N.W.P.	2	be	...	29.888	80.3	78.3	90	79.2	4	...	Cum.	
6.	N.W.	0	be	...	29.928	80.3	78.5	91	79.2	7	...	Cum. & Str.	
8.	N.E.	1	be	...	29.957	79.3	77.8	93	79.0	2	...	Cum. & Str.	
10.	P.S.	2	b	...	29.941	79.3	77.0	89	79.5	0	...	...	
Midt.	P.S.	3	bm	...	29.933	79.8	75.8	80	79.5	0	...	...	
Totals.	...	21		5	1123.4	104.3	80.5	107.7	105.9	37		Cir str.	Cum. & Str.
Mean.	N.N.E.	2	bcm	1	29.936	78.7	76.7	89	78.8	3			

## MONDAY, 11TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.E.	2	bc	...	29.906	79.0	74.8	79	79.0	0	...	...	At noon, lat. 14° 25' N, long. 129° 33' E. Temperature by self-registering thermo- meter, max. 87°, min. 76° 2. Sp. gr. 1.02112. 4.39 p.m., anchored at Manila.
4.	E.	3	bc	...	29.909	78.3	74.3	79	79.0	1	...	Cum.&Str.	
6.	E.	3	bc	...	29.915	77.3	73.8	82	78.5	1	Str.	Cum.&Str.	
8.	E.S.E.	4	bc	...	29.943	78.3	74.3	79	78.2	1	Str.	Cir cum.	
10.	E.N.E.	3	bc	...	29.945	79.8	74.8	75	77.7	2	Str.	Cir cum.	
Noon.	S.E.	4	bc	...	29.924	81.3	76.3	76	78.0	3	Str.	Cir cum.	
2.	S.S.W.	2	bc	...	29.883	83.5	77.8	73	79.5	3	Cir str.	Cum.	
4.	S.	3	bc	...	29.880	84.0	77.3	69	81.0	3	Cir str.	Cum.	
6.	N.E.	1	bc	...	29.907	82.8	75.8	68	79.7	3	Cir str.	Cum.&Str.	
8.	S.E.	1	bc	...	29.932	79.8	74.8	77	...	4	Cir.	Cum.&Str.	
10.	Calm.	0	bc	...	29.938	78.8	74.3	77	...	4	...	Cum.&Str.	
Midd.	Calm.	0	bc	...	29.923	78.8	74.8	80	...	4	...	Cum.&Str.	
Totals.	...	26	bc	...	10995	1.7	63.1	912	80.6	29	Cir cum.	Cir cum., Cum., & Str.	
Mean.	N.E.	2		...	29.916	80.1	75.3	76	78.9	2			

## TUESDAY, 12TH.

2.	Calm.	0	bc	...	29.910	77.8	73.8	79	...	9	...	Cum.	At Manila. Temperature by self-registering thermo- meter, max. 87° 5, min. 75° 2.
4.	Calm.	0	bc	...	29.905	76.8	72.8	79	...	5	...	Cum.	
6.	Calm.	0	bc	...	29.910	76.8	73.3	81	79.2	4	...	Cum.&Str.	
8.	Calm.	0	bc	...	29.944	78.3	75.8	87	...	4	...	Cum.&Str.	
10.	Calm.	0	bc	...	29.948	81.3	77.3	80	...	3	Str.	Cir cum.	
Noon.	w.	1	bc	...	29.918	83.8	78.8	76	...	4	Str.	Cir cum.	
2.	s.w.	1	bc	...	29.864	86.3	80.8	74	...	4	Cir.	Cum.&Str.	
4.	s.E.	3	bc	...	29.853	85.3	79.8	74	...	3	Cir str.	...	
6.	s.E.	1	bc	...	29.879	83.3	78.8	78	79.5	3	Cir.	Cum.	
8.	E.	1	bc	...	29.897	81.3	76.8	78	...	2	Str.	Cum.	
10.	E.	1	bc	...	29.919	80.5	76.3	79	...	2	...	Str.	
Midd.	Variable.	0	bc	...	2.915	79.8	76.3	83	...	3	...	Cum.&Str.	
Totals.	...	8	bc	...	10862	11.3	80.6	948	...	46	Cir cum.	Cir cum., Cum., & Str.	
Mean.	Variable.	1		...	29.905	80.9	76.7	79	79.3	4			

## WEDNESDAY, 13TH.

2.	Calm.	0	bc	...	29.868	78.3	75.8	87	...	9	...	Str.	At Manila. Temperature by self-registering thermo- meter, max. 86° 2, min. 75° 5.
4.	Calm.	0	bc	...	29.860	76.8	74.8	89	...	9	...	Str.	
6.	Calm.	0	bc	...	29.888	76.8	75.8	94	79.2	7	...	Cir cum.	
8.	N.	1	bc	...	29.916	77.8	75.5	82	...	3	Cir cum.	...	
10.	N.	1	bc	...	29.929	79.8	77.3	87	...	6	...	Cum.&Str.	
Noon.	w.	1	bc	...	29.866	80.8	77.8	85	...	4	Cir.	Cum.	
2.	Calm.	0	bc	...	29.828	84.8	77.8	88	...	5	Cir.	Cum.	
4.	Calm.	0	bc	...	29.847	83.8	78.8	76	...	7	Cir.	Cum.	
6.	Calm.	0	bc	...	29.860	83.3	78.3	76	79.2	8	Str.	Cum.	
8.	Calm.	0	bc	...	29.859	81.8	77.5	79	...	2	...	Str.	
10.	Calm.	0	bc	...	29.887	79.8	76.8	85	...	2	...	Cum.	
Midd.	Calm.	0	b	...	29.886	78.8	75.8	85	...	0	...	...	
Totals.	...	...	bc	...	10533	2.6	82.0	999	...	62	Cir.&Str.	Cum. & Str.	
Mean.	Calm.	0		...	29.878	80.2	76.8	83	79.2	5			

## THURSDAY, 14TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer at Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	1	b	...	29.862	77.3	75.3	89	...	0	...	...	At Manila. Temperature by self-registering thermo- meter, max. 86°, min. 72° 5.
4.	N.E.	2	b	...	29.861	76.8	73.8	84	...	0	...	...	
6.	N.E.	1	be	...	29.883	74.8	72.8	89	79.7	2	...	Str.	
8.	N.	1	be	...	29.920	76.8	73.8	84	...	2	...	Str.	
10.	Calm.	0	be	...	29.921	78.8	75.3	82	...	2	...	Cum.	
Noon.	Variable.	1	be	...	29.866	83.3	78.3	76	...	2	Gr.	Cum.	
2.	W.	1	be	...	29.869	84.3	79.8	78	...	3	Gr.	Cum.	
4.	N.N.W.	1	be	...	29.815	85.3	80.3	76	...	5	Cir.	Cm. & Str.	
6.	N.E.	1	be	...	29.830	82.8	77.8	76	79.2	3	Cir.	Cm. & Str.	
8.	N.E.	1	be	...	29.858	79.8	76.3	82	...	2	...	Cum.	
10.	Variable.	0	be	...	29.887	79.3	75.3	80	...	2	Cir.	...	11 P.M., left Manila.
Midt.	S.S.W.	1	bm	...	29.894	78.8	75.5	84	79.2	0	...	...	
Totals.	...	11	bcm	...	10406	118.1	74.3	20	11	23	Cir.	Cum. & Str.	
Mean.	Variable.	1		...	29.867	79.8	76.2	82	79.4	2			

## FRIDAY, 15TH.

2.	SE by E.	2	b	...	29.838	77.8	75.3	86	...	0	...	...	At noon, lat. 13° 46' N. long. 120° 35' E. Temperature by self-registering thermo- meter, max. 84°, min. 75°.
4.	S.E.	2	b	...	29.827	77.3	74.0	83	78.5	0	...	...	
6.	E by S.	2	be	...	29.857	76.8	74.0	85	78.5	1	Str.	Cum.	
8.	S.E.	2	be	...	29.891	77.3	74.8	87	...	1	Str.	...	
10.	E by S.	2	be	...	29.896	79.3	76.3	85	79.0	2	Cir cum.	Cum.	
Noon.	S.E.	2	be	...	29.899	80.8	76.8	80	80.0	2	Str.	Cum.	
2.	SE by E.	4	be	...	29.795	80.8	77.3	82	79.5	3	Cir str.	Cum.	
4.	E.	4	be	...	29.795	80.8	76.3	78	78.7	4	Cir str.	Cum.	
6.	S.E.	3	be	...	29.821	80.3	76.8	83	78.0	4	Cir str.	Cum.	
8.	N.E.	2	be	...	29.865	78.8	76.0	90	78.0	5	Str.	Cum.	
10.	N.E.	2	be	...	29.883	79.3	77.3	90	79.0	4	Cir.	Cum.	Black bulb 135°. Sp. gr. 1.02486.
Midt.	N.E.	1	be	...	29.855	78.8	77.3	92	78.5	3	Cir.	Cum.	
Totals.	...	26	be	...	10222	108.1	73.0	61	87.7	29	Cir. & Str.	Cum.	
Mean.	E by S.	2		...	29.852	79.0	76.1	85	78.8	2			

## SATURDAY, 16TH.

2.	NE by E.	3	cm	...	29.837	78.0	76.8	93	78.7	10	...	Cum.	At noon, lat. 12° 32' N. long. 122° 13' E. Temperature by self-registering thermo- meter, max. 83° 5, min. 76° 5.
4.	N.	2	be	...	29.828	78.3	76.8	92	78.7	8	...	Cm. & Str.	
6.	E.N.E.	1	be	...	29.838	77.8	76.8	94	...	4	...	Str.	
8.	NE by E.	2	be	...	29.866	78.8	76.8	90	79.2	6	Cir.	Cum.	
10.	NE by E.	2	be	...	29.886	79.8	77.8	90	79.5	5	Cir str.	Cum.	
Noon.	N.E.	3	be	...	29.851	80.8	78.3	88	80.0	5	Cir cum.	Cum.	
2.	N.E.	2	be	...	29.843	80.8	77.8	85	80.0	3	Cir.	Cum.	
4.	N.E.	2	be	...	29.782	80.8	78.8	90	80.5	3	Cir.	Cum.	
6.	N.E.	3	be	...	29.813	79.8	77.8	90	80.0	3	Cir.	Cum.	
8.	N.E.	1	be	...	29.823	80.0	77.8	89	...	2	...	Cum.	
10.	Variable.	1	be	...	29.841	79.8	76.8	85	80.0	2	Cir.	Cum.	Black bulb 140°. Sp. gr. 1.02528.
Midt.	Calm.	0	be	...	29.834	79.8	76.8	85	80.0	3	...	Cum.	
Totals.	...	22	be	...	10042	114.5	89.1	111	96.6	54	Cir.	Cm. & Str.	
Mean.	N.E.	2		...	29.837	79.5	77.4	89	79.7	5			

## SUNDAY, 17TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.E.	2	be	...	29.826	78.8	77.8	95	80.0	2	...	Str.	At noon, lat. 11° 43' S. long. 123° 16' E. Temperature by self-registering thermo- meter, max. 82°, min. 76° 2.  Black bulb 135°. Sp. gr. 1.02533.
4.	E.N.	2	be	...	29.861	78.8	77.8	95	80.0	1	...	Str.	
6.	E.N.E.	3	be	...	29.837	78.3	77.3	95	79.7	8	...	Cum.	
8.	S.E.	2	be	...	29.895	78.5	77.0	91	79.2	2	...	Cir.	
10.	E.N.E.	2	be	...	29.893	79.5	77.8	91	79.7	4	...	Cir.	
Noon.	E.N.	1	be	...	29.880	79.8	77.8	90	80.2	2	...	Cir.	
2.	E.	1	be	...	29.822	80.8	78.3	88	81.2	3	...	Cir.	
4.	Calm.	0	be	...	29.793	80.8	77.8	85	82.0	4	...	Cum.	
6.	S.E.	1	be	...	29.820	80.8	78.3	87	81.0	3	...	Cir str.	
8.	S.E.S.	3	be	...	29.867	80.8	78.3	88	80.0	4	...	Cum.	
10.	S.E.S.	4	be	...	29.866	80.3	79.0	94	80.0	8	...	Cum.	
Midt.	E.N.	2	be	...	29.851	79.5	77.5	90	78.7	4	...	Cum.	
Totals.	...	23	be	...	10151	116.7	94.7	9	1.7	45	...	Cir. & Str.	Cum. & Str.
Mean.	E.N.E.	2	...	...	29.846	79.7	77.9	91	80.1	4	...	...	

## MONDAY, 18TH.

2.	E.N.	2	be	...	29.823	78.8	76.3	87	80.0	2	...	Cum.	At noon, lat. 16° 22' S. long. 124° 1' E. Temperature by self-registering thermo- meter, max. 84°, min. 77° 2.  Sp. gr. 1.02523. 2 P.M., anchored at Zebu.
4.	S.E.	2	be	...	29.829	78.8	76.8	90	80.0	0	...	...	
6.	Calm.	0	be	...	29.850	78.8	77.8	95	...	5	...	Cir. & Str.	
8.	Calm.	0	be	...	29.883	79.3	76.8	88	80.0	4	...	Cir. & Str.	
10.	W.	2	be	...	29.897	81.0	78.3	86	80.5	6	...	Cum.	
Noon.	W.	1	be	...	29.877	82.3	78.8	83	81.0	5	...	Cir.	
2.	S.E.	2	be	...	29.814	79.8	77.8	90	...	8	...	Cir. & Str.	
4.	S.E.	1	be	...	29.793	82.8	78.5	79	...	5	...	Cir.	
6.	S.E.	1	be	...	29.811	82.3	77.8	78	82.0	8	...	Cir. & Str.	
8.	Calm.	0	be	...	29.842	80.3	76.8	83	...	1	...	Cir. & Str.	
10.	S.	1	be	...	29.873	79.3	76.0	84	...	4	...	Cir cum.	Cum. & Str.
Midt.	S.	1	be	...	29.858	78.8	76.8	90	...	2	...	Cir cum.	
Totals.	...	13	be	...	10141	2.3	88.5	1033	3.5	50	...	Cir. & Cum. & Str.	Cum. & Str.
Mean, Variable.	1	...	...	...	29.845	80.2	77.4	86	80.6	4	...	...	

## TUESDAY, 19TH.

2.	S.	1	be	...	29.823	78.8	76.3	87	...	6	...	Cum.	At Zebu. Temperature by self-registering thermo- meter, max. 85°, min. 77° 5.
4.	Calm.	0	be	...	29.819	78.8	76.8	90	...	8	...	Cum.	
6.	S.E.	1	be	...	29.819	78.3	76.3	89	81.0	7	...	Cum. & Str.	
8.	S.N.E.	1	be	...	29.871	78.8	76.8	90	...	8	...	Cir str.	
10.	S.N.E.	0	be	...	29.880	80.8	77.8	85	...	8	...	Cir.	
Noon.	E.N.	1	be	...	29.848	81.8	76.3	74	...	5	...	Cir.	
2.	S.E.	2	be	...	29.813	83.3	76.8	70	...	6	...	Cir.	
4.	E.N.E.	1	be	...	29.796	83.0	77.3	74	...	1	...	Cir.	
6.	S.E.	2	be	...	29.811	81.3	76.3	76	81.5	2	...	Cir.	
8.	S.	0	be	...	29.839	79.8	75.8	80	...	2	...	Cir.	
10.	S.N.W.	1	be	...	29.846	77.8	74.8	84	...	2	...	Cir.	Cum.
Midt.	Calm.	0	be	...	29.838	77.3	74.3	84	...	1	...	Cir.	
Totals.	...	10	be	...	10003	119.8	75.6	983	...	56	...	Cir.	Cum. & Str.
Mean.	S.E.S.	1	...	...	29.834	80.0	76.3	82	81.2	5	...	...	

## WEDNESDAY, 20TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 4.	Barometer reduced to 32° and sea-level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. at 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	S.S.E.	1	bc	...	29.831	76.3	73.8	87	...	2	...	Cm.&Str.	At Zebu. Temperature by self-registering thermometer, max. 85°, min. 74°.
4.	Calm.	0	bc	...	29.824	75.8	72.8	84	...	1	...	Cm.&Str.	
6.	S.S.E.	1	bc	...	29.831	74.8	73.3	91	81.0	4	...	Cm.&Str.	
8.	Calm.	0	bc	...	29.861	77.8	75.3	87	...	3	Cir.	Cum.	
10.	N.E.	1	bc	...	29.866	79.8	75.8	80	...	3	...	Cum.	
Noon.	N.E.	1	bc	...	29.834	82.8	77.8	76	...	3	...	Cum.	
2.	N.E.	1	bc	...	29.800	82.8	76.8	72	...	3	...	Cum.	
4.	N.E.	1	bc	...	29.777	83.8	77.3	70	...	3	...	Cum.	
6.	N.E.	1	bc	...	29.847	81.8	75.8	72	81.5	3	Cir.	...	
8.	N.	1	bc	...	29.826	79.3	74.8	78	...	2	Cir.	Cum.	
10.	Calm.	0	b	...	29.833	77.8	74.0	80	...	0	...	...	
Midt.	Calm.	0	b	...	29.849	76.8	71.8	75	...	0	...	...	
Totals.	...	8	bc	...	997.9	109.6	59.3	112	...	27	Cir.	Cum. & Str.	
Mean.	NE <sup>3</sup> N.	1	...	...	29.831	79.1	74.9	79	81.2	2	...	...	

## THURSDAY, 21st.

2.	NE <sup>3</sup> N.	1	b	...	29.847	75.8	73.8	89	...	0	...	...	At Zebu. Temperature by self-registering thermometer, max. 83.7°, min. 74°.
4.	Calm.	0	b	...	29.851	74.8	72.8	89	...	0	...	...	
6.	Calm.	0	b	...	29.849	74.8	72.3	87	...	0	...	...	
8.	Calm.	0	b	...	29.855	76.8	73.8	84	...	1	Cir cum.	...	
10.	N.E.	1	bc	...	29.861	78.8	76.3	87	...	4	Cir.	Cum.	
Noon.	E.N.E.	1	bc	...	29.825	80.8	76.3	78	...	3	Cir.	Cum.	
2.	E.N.E.	2	bc	...	29.777	81.8	75.8	72	...	4	Cir.	Cum.	
4.	E.N.E.	1	bc	...	29.774	81.8	77.0	77	...	2	Cir.	Cm.&Str.	
6.	E.N.E.	1	bc	...	29.782	80.8	75.8	76	81.0	2	Cir.	Cm.&Str.	
8.	Calm.	0	bc	...	29.794	79.8	75.8	80	...	2	Str.	Cum.	
10.	N.E.	1	bc	...	29.829	78.8	74.8	80	...	4	Cir.	Cm.&Str.	
Midt.	N.	1	bc	...	29.810	77.8	74.0	80	...	2	Cir.	...	
Totals.	...	9	bc	...	984.5	102.6	58.5	119	...	24	Cir str.	Cum. & Str.	
Mean.	N.E.	1	...	...	29.820	78.5	74.9	82	81.0	2	...	...	

## FRIDAY, 22d.

2.	Calm.	0	c	...	29.804	76.8	73.8	84	...	10	...	Cum.	At Zebu. Temperature by self-registering thermometer, max. 83°, min. 76°.
4.	E.N.E.	1	c	...	29.798	77.3	74.8	86	...	10	...	Cm.&Str.	
6.	N.E.	1	c	...	29.813	77.3	74.8	86	80.0	10	...	Cm.&Str.	
8.	W.S.	1	bc	...	29.855	78.0	75.8	88	...	9	Cir.	Cm.&Str.	
10.	S.E.	1	bc	...	29.866	81.3	78.5	86	...	3	...	Cum & Cm	
Noon.	NE <sup>3</sup> E.	2	bc	...	29.817	81.3	77.8	83	81.2	8	Cir cum.	Cum.	
2.	E.	1	bc	...	29.787	81.3	78.0	84	...	6	Str.	Cum.	
4.	N.E.	2	bc	...	29.780	82.3	77.8	78	...	7	Cir.	Cum.	
6.	N.E.	1	bc	...	29.781	80.8	77.3	83	81.0	8	Str.	Cum.	
8.	N.	1	bc	...	29.807	79.5	76.8	86	...	7	...	Cm.&Str.	
10.	N.	1	bc	...	29.815	77.8	75.8	89	...	9	Str.	Cum.	
Midt.	Calm.	0	bc	...	29.824	77.8	75.5	88	...	9	...	Cum.	
Totals.	...	12	bc	...	974.7	111.5	76.7	61	...	96	Cir. & Str.	Cum. & Str.	
Mean.	Variable.	1	...	...	29.812	79.3	76.4	85	80.7	8	...	...	

SATURDAY, 23<sup>d</sup> JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E.	1	bc	...	29.810	77.3	74.8	87	...	3	...	Cum.	At Zebu. Temperature by self-registering thermometer, max. 85° 5, min. 75° 9.
4.	S.E.	1	bc	...	29.796	75.8	73.8	89	...	4	...	Cum.	
6.	S.	1	bc	...	29.836	75.3	73.8	91	80.7	4	Cir cum.	...	
8.	Caln.	0	bc	...	29.871	78.8	76.3	87	...	3	Cir cum.	...	
10.	S.E.	1	bc	...	29.866	80.8	77.8	85	...	4	Cir str.	Cum.	
Noon.	Caln.	0	bc	...	29.841	82.3	78.8	83	...	5	Cir str.	Cum.	
2.	S.E.	2	bc	...	29.808	82.8	78.3	78	...	6	Cir str.	Cum.	
4.	S.E.	1	bc	...	29.801	82.3	77.8	78	...	4	Cir str.	Cum.	
6.	S.E.	1	bc	...	29.829	81.0	77.5	82	80.7	3	Cir str.	Cum.	
8.	S.E.	1	bc	...	29.831	80.3	76.8	83	...	3	Cir.	Cum.	
10.	Caln.	0	bc	...	29.847	79.8	76.8	85	...	8	Cir.	Cum.	
Midd.	S.E.	1	bc	...	29.855	79.3	75.8	83	...	9	...	Cum.	
Totals.	...	10	bc	...	9991	115.8	78.3	1011	...	54	Cir str.	Cum.	
Mean.	S.E.	1		...	29.833	79.6	76.5	84	80.7	4			

SUNDAY, 24<sup>th</sup>.

2.	S.E.	1	bc	...	29.855	77.8	75.8	89	...	9	...	Cir cum.	At Zebu. Temperature by self-registering thermometer, max. 85°, min. 76° 5.
4.	Variable.	0	bc	...	29.856	77.8	75.8	89	...	9	...	Cum.	
6.	Caln.	0	bc	...	29.876	77.8	75.8	89	81.0	7	...	Cum.	
8.	S.E.	1	bc	...	29.905	78.8	76.8	90	...	4	Cir.	Cum.	
10.	E.	1	bc	...	29.894	81.8	77.8	80	...	5	Cir.	Cum.	
Noon.	S.E.	1	bc	...	29.863	81.8	76.3	74	...	5	Cir.	Cum.	
2.	E.	1	bc	...	29.868	84.3	77.3	68	...	4	Cir.	Cum.	
4.	S.E.	1	bc	...	29.803	84.3	77.8	70	...	5	Cir.	Cum.	
6.	N.E. S.	1	bc	...	29.840	82.8	78.0	77	81.0	2	Str.	Cum.	
8.	N.E.	2	bc	...	29.861	81.8	78.8	85	...	2	...	Cum.	
10.	N.W. W.	1	bc	...	29.867	79.8	77.3	88	80.0	2	...	Cum.	
Midd.	N.W. W.	2	bc	...	29.875	79.8	77.8	90	80.0	3	Cir.	Cum.	
Totals.	...	12	bc	...	10303	8.6	85.3	989	2.0	57	Cir str.	Cum.	
Mean.	N.E. S.	1		...	29.859	80.7	77.1	82	80.5	5			

MONDAY, 25<sup>th</sup>.

2.	N.W.	2	bc	...	29.856	79.3	77.3	90	80.0	5	Cir str.	Cum.	At noon, lat. 9° 27' N, long. 123° 44' E. Temperature by self-registering thermometer, max. 85°, min. 75°.
4.	S.E.	1	bc	...	29.839	79.3	77.0	89	80.0	7	Cir.	Cum.	
6.	S.W.	2	bc	...	29.880	78.3	76.3	89	80.0	5	...	Cum.	
8.	S.E.	1	bc	...	29.904	79.5	77.8	91	80.0	5	Cir str.	Cum.	
10.	N.N.E.	2	bc	...	29.898	79.8	77.3	88	80.0	5	Cir str.	Cum.	
Noon.	S.E.	1	bc	...	29.873	83.8	79.8	80	...	7	Cir str.	Cum.	
2.	Caln.	0	bc	...	29.811	82.8	79.3	82	80.2	7	Str.	Cum.	
4.	Variable.	1	bc	...	29.810	82.8	79.0	81	80.2	6	Cir str.	Cum.	
6.	S.E.	1	bc	...	29.837	82.8	79.3	82	80.2	5	Cir str.	Cum.	
8.	Caln.	0	bc	...	29.872	81.0	77.8	84	80.0	5	Cir str.	Cum.	
10.	N.E. S.	1	bc	...	29.882	80.8	77.8	85	80.0	8	...	Cir & Str.	Cum. & Str.
Midd.	S.E. S.	1	bc	...	29.872	79.8	77.8	90	80.0	6	...		
Totals.	...	13	bc	...	10334	10.0	96.5	71	6	71	Cir str.	Cum. & Str.	
Mean.	N.N.E.	1		...	29.861	80.8	78.0	86	80.1	6			

TUESDAY, 26TH JANUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE <sup>b</sup> N.	2	bc	...	29.837	79.3	77.8	93	80.0	6	Cir str.	Cum.	At noon, lat. 9° 15' S. long. 124° 38' E. Temperature by self-registering thermo- meter, max. 82°, min. 77°. Sp. gr. 1.02535. 1.30 P.M., anchored off Camiguin island. 6 P.M., left Camiguin island.
4.	NE <sup>b</sup> N.	2	bc	...	29.838	78.8	77.8	95	80.0	8	...	Cum.	
6.	S.E.	1	bc	...	29.886	78.8	76.8	90	80.0	4	...	Cum.	
8.	E.	1	bc	...	29.901	79.8	77.0	86	80.5	3	Cir.	...	
10.	NE <sup>b</sup> E.	2	bc	...	29.897	79.8	76.3	83	80.5	4	Cir str.	Cum.	
Noon.	NE <sup>b</sup> E.	4	bc	...	29.866	79.5	77.5	90	80.7	6	Cir str.	Cum.	
2.	E.	2	bc	...	29.818	80.3	77.3	85	...	8	Cir str.	Cum.	
4.	E.	2	bc	...	29.822	80.8	77.8	85	...	9	Cir str.	Cum.	
6.	E <sup>b</sup> N.	1	bc	...	29.848	80.0	77.3	86	80.0	9	...	Cm.&Str.	
8.	N.E.	2	bc	...	29.861	79.8	77.8	90	80.0	7	...	Cm.&Str.	
10.	E.N.E.	3	bc	...	29.886	79.8	77.8	90	81.0	6	...	Cir.&Str.	
Midd.	E <sup>b</sup> N.	2	bc	...	29.885	79.3	77.8	93	80.7	4	...	Cum.	
Totals.	...	24	bc	...	10345	116.0	89.0	106	3.4	74	Cir str.	Cum. & Str.	
Mean.	E.N.E.	2		...	29.862	79.7	77.4	89	80.3	6			

WEDNESDAY, 27TH.

2.	NE <sup>b</sup> E.	2	bc	...	29.851	78.8	77.3	93	80.7	7	...	Cum.	At noon, lat. 8° 42' S. long. 123° 15' E. Temperature by self-registering thermo- meter, max. 81°, min. 78°. Sp. gr. 1.02550.
4.	N.E.	3	bc	...	29.845	79.3	77.8	93	80.5	6	...	Cum.	
6.	N.	2	bc	...	29.872	78.8	77.0	91	80.0	4	...	Cum.	
8.	N.	3	bc	...	29.924	78.3	76.3	89	80.0	8	Cir.	Cum.	
10.	N.	2	bc	...	29.928	79.3	76.8	88	80.0	8	Cir str.	Cum.	
Noon.	N.	2	bc	...	29.913	80.3	77.3	85	80.0	7	Cir str.	Cum.	
2.	NE <sup>b</sup> E.	3	bc	...	29.838	80.0	77.3	86	80.0	8	Str.	Cum.	
4.	NE <sup>b</sup> E.	3	bc	...	29.839	79.8	77.8	90	79.7	9	Cir str.	Cum.	
6.	E.N.E.	3	bc	...	29.858	79.8	76.8	85	79.7	5	Cir.	Cm.&Str.	
8.	E.N.E.	3	bc	...	29.889	79.8	77.8	90	79.5	5	...	Cm.&Str.	
10.	E.N.E.	3	bc	...	29.891	79.3	78.3	95	79.5	5	...	Cm.&Str.	
Midd.	N.	1	bc	...	29.912	79.8	78.3	93	80.0	5	...	Cm.&Str.	
Totals.	...	30	bc	...	10560	113.3	88.8	118	119.6	77	Cir. & Str.	Cum. & Str.	
Mean.	NE <sup>b</sup> N.	2		...	29.880	79.4	77.4	90	80.0	6			

THURSDAY, 28TH.

2.	N.N.E.	4	bcp	...	29.874	77.8	75.3	86	80.0	10	Cir cum.	Cm.&Nb.	At noon, lat. 7° 53' S. long. 121° 43' E. Temperature by self-registering thermo- meter, max. 81°, min. 76°. Current, s. 69° W. 14°. Sp. gr. 1.02590.
4.	NE <sup>b</sup> E.	1	bc	...	29.870	78.3	77.0	93	80.0	4	Str.	Cum.	
6.	NE <sup>b</sup> E.	3	bc	...	29.890	78.3	76.8	91	80.0	7	Str.	Cum.	
8.	NE <sup>b</sup> E.	1	bc	...	29.916	79.0	77.3	92	80.7	8	Str.	Cum.	
10.	NE <sup>b</sup> E.	4	bc	...	29.967	80.8	78.8	85	81.0	6	Str.	Cir cum.	
Noon.	NE <sup>b</sup> E.	3	bc	...	29.883	81.8	78.8	85	81.0	4	Str.	Cir cum.	
2.	NE <sup>b</sup> E.	2	bc	...	29.845	80.8	78.8	90	81.0	4	Str.	Cir cum.	
4.	NE <sup>b</sup> E.	1	bc	...	29.832	81.3	79.3	90	81.5	4	Str.	Cir cum.	
6.	Variable.	1	bc	...	29.850	81.8	78.8	85	81.5	8	Cir str.	Cum.	
8.	Variable.	0	bc	...	29.890	80.8	78.3	88	81.7	5	...	Cum.	
10.	Calm.	0	bc	...	29.896	80.8	78.8	90	81.2	9	...	Cum.	
Midd.	s.	1	bc	...	29.895	81.3	77.8	83	81.0	4	...	Cm.&Str.	
Totals.	...	21	bcp	...	10617	2.8	95.8	103	10.6	73	Cir str.	Cir cum. & Cum.	
Mean.	E.N.E.	2		...	29.885	80.2	78.0	89	80.9	6			

## FRIDAY, 29TH JANUARY 1875.

Hour.	Wind.		Force.	Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True	Direction					Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.		0	bc	...	29.870	79.8	77.8	90	81.0	4	Str.	Cum.	At Sanboangan. Temperature by self-registering thermo- meter, max. 84° 2, min. 75°. 7 A.M., anchored off Sanboangan.
4.	Calm.		0	bcm	...	29.851	78.8	76.3	93	80.0	3	Str.	Cum.	
6.	E.		1	bc	...	29.882	76.3	74.8	91	...	4	...	Cum.	
8.	...		...	...	...	29.909	78.8	76.8	90	...	...	...	...	
10.	W.S.W.		0	bc	...	29.915	79.8	77.8	90	...	5	Cir cum.	Cum.	4 P.M., left Sanboangan. 6.30 P.M., anchored off Malanipa island.
Noon.	E.S.		1	bc	...	29.886	81.3	78.3	85	81.5	8	...	Cum.	
2.	S.E.		1	bc	...	29.830	82.3	79.3	85	...	9	Str.	Cum.	
4.	S.W.		1	bc	...	29.822	82.8	79.8	85	...	8	...	Cum.	
6.	Calm.		0	bc	...	29.844	82.3	78.8	83	81.0	7	Str.	Cum.	
8.	W.S.W.		1	bc	...	29.876	81.5	78.8	86	...	6	Str.	Cum.	
10.	W.S.W.		1	bc	...	29.878	80.3	77.8	88	...	6	Str.	Cum.	
Midt.	Calm.		0	bc	...	29.888	80.8	77.8	85	81.0	5	Str.	Cum.	
Totals.	...		6	bc	...	10451	4.8	95.1	91	4.5	65	Str.	Cum.	
Mean.	Variable.		1		...	29.871	80.4	77.9	88	80.9	6			

## SATURDAY, 30TH.

2.	Calm.		0	bc	...	29.841	79.3	77.8	93	...	5	Str.	Cum.	At noon, lat. 6° 51' N. long. 122° 22' E. Temperature by self-registering thermo- meter, max. 84° 2, min. 77° 0. 5 A.M., left Malanipa anchorage to swing ship.
4.	Calm.		0	bc	...	29.861	78.8	76.8	90	...	4	...	Cum.	
6.	N.W.		1	bc	...	29.887	78.8	76.8	90	81.7	8	...	Cum.	
8.	N.E.		1	bc	...	29.920	80.3	78.3	96	81.7	5	Cir str.	Cum.	
10.	N.		1	bcp	...	29.922	81.5	79.3	89	82.7	7	Cir cum.	Cum.	4 P.M., anchored off Sanboangan.
Noon.	N.		1	bc	...	29.899	80.5	78.8	91	82.5	9	Str.	Cum.	
2.	N.		1	bc	...	29.838	80.8	78.3	88	83.0	7	Cir.	Cum.	
4.	N.		0	bc	...	29.932	82.8	79.8	85	83.0	5	Cir.	Cum.	
6.	W.		1	bc	...	29.858	82.8	79.8	85	81.7	7	Str.	Cum.	
8.	Calm.		0	bc	...	29.881	80.8	77.8	85	...	6	...	Cum.	
10.	N.		1	bcm	...	29.910	79.3	76.8	88	...	9	Str.	Cum.	
Midt.	N.		1	bcm	...	29.879	77.8	75.8	89	...	4	...	Cum.	
Totals.	...		8	bcm	...	10628	3.5	96.1	103	16.3	76	Cir str.	Cum.	
Mean.	N.W.		1		...	29.886	80.3	78.0	89	82.3	6			

## SUNDAY, 31ST.

2.	Calm.		0	bc	...	29.879	75.8	73.8	89	...	5	...	Cum.	At Sanboangan. Temperature by self-registering thermo- meter, max. 84° 2, min. 75° 2.
4.	Calm.		0	bc	...	29.875	76.8	74.3	86	...	5	Cir.	Cum.	
6.	Calm.		0	c	...	29.883	76.3	74.8	91	81.7	6	Cir.	Cum.	
8.	Calm.		0	bc	...	29.923	76.3	74.8	91	...	10	Str.	Cum.	
10.	Calm.		0	bc	...	29.916	80.8	78.8	90	...	8	Str.	Cum.	
Noon.	E.		1	bc	...	29.893	81.8	79.3	88	...	7	Str.	Cum.	
2.	E.S.		2	bc	...	29.825	82.3	79.5	86	...	7	...	Cum.	
4.	E.S.		1	c	...	29.823	82.9	79.3	86	...	10	...	Cum.	
6.	E.		1	bc	...	29.831	81.3	78.8	88	81.7	8	Stc.	Cum.	
8.	Calm.		0	c	...	29.853	80.3	78.3	90	...	10	...	Cum.	
10.	Calm.		0	o	...	29.858	79.3	77.0	89	...	10	...	Cum.	
Midt.	Calm.		0	o	...	29.845	78.8	76.8	90	...	10	...	Cum.	
Totals.	...		5	bc	...	10402	11.8	85.5	1064	...	96	Cir str.	Cum.	
Mean.	E.		1		...	29.867	79.3	77.1	89	81.7	8			

## MONDAY, 1ST FEBRUARY 1875.

Hour	Wind		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.	
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper	Lower.		
2.	N.	1	bc	...	29.845	78.3	76.8	91	...	5	...	Cum.	At Sanboangan. Temperature by self-registering thermo- meter, max. 84° 2, min. 76° 0.	
4.	Variable.	1	or	...	29.819	77.8	77.3	97	...	10	...	Cum.		
6.	Calm.	0	o	...	29.842	76.8	75.8	94	81.5	10	...	Cum.		
8.	N.	1	o	...	29.875	77.8	76.8	94	...	10	...	Cum. & Str.		
10.	N.	1	c	...	29.875	80.5	78.3	89	...	9	...	Cum. & Str.		
Noon.	N. E.	1	c	...	29.862	81.5	78.3	84	...	10	...	Cum. & Str.		
2.	N. E.	2	bc	...	29.808	83.3	78.8	78	...	7	...	Cum. & Str.		
4.	N. E.	1	bc	...	29.788	82.8	78.8	80	...	9	...	Cum. & Str.		
6.	N. E.	1	bc	...	29.786	81.8	78.8	85	82.0	7	...	Cum.		
8.	N. E.	0	bc	...	29.793	80.5	78.3	89	...	7	...	Cir.		
10.	N.	1	bc	...	29.830	78.8	76.3	88	...	3	...	Cum.		
Midt.	Calm.	0	bc	...	29.826	77.8	75.3	86	...	3	...	Cum. & Str.		
Totals.	...	10	bcpr	...	9949	117.7	89.6	95	...	90			Cir.	Cum. & Str.
Mean.	N. N. E.	1		...	29.820	79.8	77.5	88	81.8	7				

## TUESDAY, 2d.

2.	Calm.	0	bc	...	29.820	75.8	74.3	91	...	2	...	Cum.	At Sanboangan. Temperature by self-registering therm meter, max. 86°, min. 74° 5.
4.	Calm.	0	bc	...	29.793	75.3	73.8	91	...	2	...	Cum.	
6.	N. E.	1	bc	...	29.795	75.8	74.3	91	81.5	4	Cir.	Cum.	
8.	Calm.	0	bc	...	29.829	77.8	75.8	89	...	3	Cir.	...	
10.	N. E.	1	bc	...	29.843	80.8	76.8	80	...	5	Cir.	Cum.	
Noon.	N. E.	3	bc	...	29.822	82.8	77.8	76	...	4	Cir.	Cum.	
2.	N. E.	4	bc	...	29.780	84.3	78.3	72	...	4	Str.	Cir.&Str.	
4.	N. E.	3	bc	...	29.765	84.3	78.3	72	...	5	Str.	Cir cum	
6.	N. E.	1	bc	...	29.785	83.3	78.8	78	83.0	3	Str.	Cir cum.	
8.	N. E.	1	bc	...	29.829	81.3	78.8	88	...	2	...	Cir cum.	
10.	Calm.	0	bcl	...	29.875	79.3	76.3	85	...	2	...	Cum.	
Midt.	N.	1	bclt	...	29.876	78.3	76.3	89	...	5	...	Cum.	
Totals.	...	15	bclt	...	9822	119.1	79.6	100.2	4.5	41	Cir str.	Cir cum. & Cum.	
Mean.	N. E.	1		...	29.818	79.9	76.6	83	82.2	3			

## WEDNESDAY, 3d.

2.	N.	3	erlt	...	29.851	76.0	75.8	99	...	10	...	Nimb.	At Port Isabella. Temperature by self-registering thermo- meter, max. 84° 2, min. 74° 2. 8 A.M., left Sanboangan. Noon, anchored at Port Isabella.
4.	N.	0	bc	...	29.851	75.3	74.3	94	...	4	...	Cum.	
6.	N.E.	1	bc	...	29.853	79.3	73.8	73	81.5	4	...	Str.	
8.	W.	1	bc	...	29.913	78.3	76.3	89	...	4	...	Cir cum.	
10.	S.E.	1	bc	...	29.913	80.8	78.8	90	...	7	...	Cir cum.	
Noon.	...	...	...	...	29.835	...	...	...	...	...	...	Cir.	
2.	N.E.	3	bc	...	29.835	83.8	78.8	76	...	4	...	Cir.	
4.	N.E.	2	bc	...	29.838	83.3	78.8	78	...	8	...	Str.	
6.	N.E.	1	bc	...	29.841	81.8	78.5	84	81.0	6	...	Cir.	
8.	Calm.	0	bc	...	29.886	78.3	76.8	91	...	3	...	Str.	
10.	Calm.	0	bc	...	29.915	75.8	74.8	94	...	2	...	Cum.	
Midt.	Calm.	0	bc	...	29.930	75.8	74.8	94	...	9	...	Cum.	
Totals.	...	12	bcprlt	...	10461	98.5	71.5	962	...	61	Cir str.	Cum. & Str.	
Mean.	Variable.	1		...	29.872	78.9	76.5	87	81.2	6			

## THURSDAY, 4TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	cp	...	29.903	76.3	75.3	94	...	9	...	Cum.	At Port Isabella. Temperature by self-registering thermo- meter, max. 83° 5, min. 74° 0.
4.	S. E.	2	cp	...	29.903	75.8	74.8	94	...	10	...	Cum.	
6.	Calm.	0	be	...	29.925	74.5	73.8	95	80.7	8	Cir.	Cum.	
8.	Calm.	0	be	...	29.943	76.8	75.3	91	...	3	Cir.	Cum.	
10.	Calm.	0	be	...	29.946	80.8	77.8	85	...	15	Cir.	Cum.	
Noon.	S. E.	1	be	...	29.925	81.3	75.8	74	...	7	Cir.	Cum.	2 P.M., left Port Isabella. 7 P.M., anchored off Zamboangan.
2.	E. S. E.	1	be	...	29.870	82.8	77.3	74	...	12	Cir str.	Cum.	
4.	E. S. E.	3	be	...	29.860	81.3	77.8	82	...	7	Cir str.	Cum.	
6.	S. E.	1	be	...	29.873	80.8	77.3	83	80.5	7	Str.	Cum.	
8.	E.	1	be	...	29.888	77.8	75.8	89	...	10	...	Cum.	
10.	S. E.	1	be	...	29.916	76.8	74.3	86	...	5	...	Cum.	Total.
Milt.	S. E.	0	be	...	29.918	76.8	74.8	89	...	3	...	Cum.	
Totals.	...	11	...	...	10870	101.8	70.1	76	...	82	Cir. & Cir str.	Cum.	
Mean.	NE <sup>1</sup> E.	1	bep	...	29.906	78.5	75.8	86	80.6	7			

## FRIDAY, 5TH.

2.	S. N. E.	1	be	...	29.883	75.3	73.8	91	...	4	...	Cum.	At Zamboangan. Temperature by self-registering thermo- meter, max. 90°, min. 74°. 11.40 A.M., wind shifted suddenly from E.N.E. to W.S.W.
4.	S.	2	be	...	29.855	74.8	72.8	89	...	2	...	Cum.	
6.	Calm.	0	be	...	29.846	74.3	73.3	94	81.0	4	...	Cum.	
8.	E. N. E.	1	be	...	29.839	77.3	75.0	88	...	4	Cir str.	...	
10.	E. N. E.	3	be	...	29.857	81.3	75.8	74	...	3	Cir str.	Cum.	
Noon.	W. S. W.	4	be	...	29.837	82.8	80.3	87	...	3	...	Cum.	6 P.M., left Zamboangan.
2.	S. W.	2	be	...	29.799	84.3	81.8	88	...	3	...	Cum.	
4.	S. W.	1	be	...	29.788	85.8	80.3	74	...	2	...	Cum.	
6.	Calm.	0	be	...	29.800	83.8	80.3	82	...	1	Cir.	...	
8.	S. W.	1	be	...	29.828	81.3	78.8	88	...	1	...	Cum.	
10.	W.	1	be	...	29.860	80.5	77.8	86	82.0	3	...	Cum.	Total.
Milt.	W. S. W.	2	b	...	29.827	79.8	77.5	89	82.0	0	...	...	
Totals.	...	18	...	...	10115	1.3	87.5	1030	5.0	30	Cir str.	Cum.	
Mean.	Variable.	2	be	...	29.843	80.1	77.3	86	81.7	3			

## SATURDAY, 6TH.

2.	W. S. W.	1	be	...	29.819	79.5	77.5	90	81.7	2	...	Cum.	At noon, lat. 6° 46' N, long. 122° 57' E. Temperature by self-registering thermo- meter, max. 87° 5, min. 78° 5.
4.	Variable.	2	be	...	29.779	79.3	77.5	91	81.7	4	...	Cum. & Nb.	
6.	S. N. E.	1	be	1	29.822	79.5	77.3	89	...	1	Cir str.	Cum.	
8.	S. N. E.	2	be	1	29.863	86.8	76.8	80	81.7	5	Cir. & C. cm	Cum.	
10.	NE <sup>1</sup> S.	3	be	...	29.877	89.3	77.8	88	81.7	4	Cir.	Cum. & Str.	
Noon.	NE <sup>1</sup> S.	3	be	...	29.839	89.8	75.3	87	81.7	4	Cir.	Cum. & Str.	Black bulb 136°. Sp. gr. 1.02502.
2.	S. N. E.	2	be	...	29.840	83.8	80.5	84	82.0	4	Cir str.	...	11.30 P.M., heavy nimbus passing over followed by breeze from N.E.
4.	S. N. W.	1	be	...	29.835	85.8	81.5	79	82.0	3	Cir str.	...	
6.	Variable.	0	be	...	29.817	82.5	79.5	85	82.0	3	...	Cum. & C. str.	
8.	W.	1	be	...	29.864	81.8	78.8	85	81.7	8	...	Cum.	
10.	S. W.	0	be	...	29.867	81.3	78.8	88	81.7	6	...	Cum.	
Milt.	S. E.	3	bep	...	29.883	80.8	78.8	90	81.7	7	...	Cum. & Nb.	
Totals.	...	19	...	2	10165	16.2	103.1	1036	19.6	51	Cir str.	Cum., Str., & Nimb.	
Mean.	S <sup>1</sup> W.	2	bep	1	29.842	81.3	78.6	86	81.8	4			

## SUNDAY, 7TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	3	cp	...	29.798	78.8	78.0	95	81.5	10	...	Cum.	At noon, lat. 5° 59' N. long. 123° 38' E. Temperature by self-registering thermometer, max. 85°, min. 77°. Current, s. 16°.
4.	N.N.W.	1	bcp	...	29.805	79.8	78.8	95	81.5	8	...	Cum.	
6.	N.E.N.	2	bc	...	29.857	79.8	77.8	90	81.5	7	...	Cum.	
8.	N.E.	3	bc	...	29.893	81.3	78.8	88	82.0	6	...	Cir.	
10.	Variable.	1	bc	...	29.884	82.3	79.8	88	82.0	7	...	Cum.&Str.	
Noon.	E.S.E.	1	bc	...	29.862	81.8	79.8	90	82.2	7	Cr.&Cstr.	Cum.&Nb.	
2.	E.S.E.	1	bc	...	29.830	83.8	80.8	85	82.2	7	...	Cum.	
4.	E.S.E.	0	bc	...	29.810	83.3	80.8	88	82.5	8	...	Cum.&Nb.	
6.	N.	1	cd	...	29.857	80.3	79.3	95	82.5	10	...	Cum.&Nb.	
8.	Variable.	0	cr	...	29.858	79.8	78.8	95	82.0	9	...	Cum.&Str.	
10.	s.w.	1	ocr	...	29.888	78.8	77.8	95	82.0	10	...	Cum.	Black bulb 141°. Sp. gr. 1.02492. 4.15 P.M., wind shifted to N.N.W.
Midd.	s.w.	0	clu	...	29.886	79.3	79.0	99	82.0	7	...	Cum.	
Totals.	...	14	bcpr	...	10225	9.1	109.5	23	23.9	96	Cir. & Cir str.	Cum., Str., & Nimb.	
Mean.	Variable.	1		...	29.852	80.8	79.1	92	82.0	8			

## MONDAY, 8TH.

2.	E.S.E.	1	bel	...	29.851	77.8	77.8	100	81.7	6	...	Cum.	At noon, lat. 5° 47' N. long. 124° 1' E. Temperature by self-registering thermometer, max. 84°, min. 76°. Current, s. 30° W. 8°. 9 A.M., a peculiar cross swell from the N.
4.	N.E.	3	crcl	...	29.834	78.3	77.3	94	81.7	10	...	Cum. Str.&Nb.	
6.	N.N.E.	2	bc	...	29.848	77.8	76.8	94	81.0	4	...	Cum str.	
8.	N.E.	1	bc	...	29.866	79.8	77.3	88	81.0	5	...	Cir cum.	
10.	N.E.	2	bc	...	29.871	82.3	79.8	88	82.5	5	...	Cir str.	
Noon.	S.S.E.	1	bc	...	29.853	83.0	80.3	86	83.0	8	...	Cir.	
2.	swbyw.	2	bc	0	29.821	83.3	80.3	86	83.0	8	...	Cir str.	
4.	swbyw.	1	bc	...	29.818	81.8	79.5	89	82.5	7	...	Cum.&Str.	
6.	W.S.W.	1	bc	...	29.834	81.5	79.5	90	...	10	...	Cum.&Nb.	
8.	swbyw.	1	bc	...	29.858	81.0	79.0	90	81.7	8	...	Cum.&Str.	
10.	S.	1	bc	...	29.880	80.8	78.8	90	82.0	7	...	Cum.&Nb.	Sp. gr. 1.02494.
Midd.	N.	1	bel	...	29.870	80.8	79.8	95	81.7	9	...	Cum.&Str.	
To	...	17	bcpcl	0	10204	8.2	106.4	10	21.8	89	Cir str.	Cum., Str., & Nimb.	
Mean.	Variable.	1		0	29.850	80.7	78.9	91	82.0	7			

## TUESDAY, 9TH.

2.	E.	1	bcm	1	29.858	80.5	79.3	94	82.0	5	...	Cum.	At noon, lat. 5° 33' N. long. 125° 35' E. Temperature by self-registering thermometer, max. 84° 2', min. 77° 7'. Current, s. 79° E. 20°. 3 A.M., fresh N.E. breeze sprang up after passing east of high land about Tongareva.
4.	N.E.	5	bcm	1	29.835	79.8	77.5	89	82.0	9	...	Cum.&Cst	
6.	N.E.N.	3	bc	...	29.887	78.3	76.8	91	81.2	5	...	Str.	
8.	N.E.	1	bc	...	29.905	78.8	76.8	90	82.0	6	...	Cir.	
10.	N.E.N.	3	bcm	2	29.876	81.8	78.8	85	81.0	8	...	Str.	
Noon.	N.E.	4	bcm	3	29.839	80.8	79.0	91	80.0	8	...	Cir cum.	
2.	N.E.N.	3	bc	2	29.815	80.8	79.3	92	80.0	8	...	Cum.&Cst	
4.	N.E.N.	4	bc	3	29.815	80.8	78.8	90	80.0	9	...	Cum.	
6.	N.E.	5	bcpq	3	29.856	78.8	77.8	95	79.7	9	...	Cum.&Str.	
8.	N.N.E.	4	bc	3	29.859	78.8	77.3	92	79.5	7	...	Cum.	Sp. gr. 1.02571.
10.	N.N.E.	3	bc	3	29.857	79.8	78.8	95	79.5	6	...	Cum.	
Midd.	N.N.E.	3	bcm	2	29.844	79.5	78.5	95	79.5	2	...	Cum.	
Totals.	...	39	bcmq	20	10246	118.5	98.7	19	6.4	82	Cir str.	Cum., Str., & Cum str.	
Mean.	N.E.	3		2	29.851	79.9	78.2	92	80.5	7			

## WEDNESDAY, 10TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 6.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	4	bc	3	29.816	79.8	78.8	95	80.0	4	...	Cum.	At noon, lat. 4° 31' N. long. 127° 7' E. Temperature by self-registering thermo- meter, max. 85° 5, min. 76°. Current, s. 16° w. 38'. Swell from S.W. Cir. Cum. Black bulb 137°. Sp. gr. 1.02570.
4.	N.N.E.	2	bcm	2	29.815	79.8	78.8	95	80.0	6	...	Cum.	
6.	N.E.	3	bcp	2	29.815	78.8	78.3	94	80.0	6	...	Cum.	
8.	E.N.E.	3	bcp	2	29.881	79.8	78.8	95	80.2	8	Cir str.	Cum.	
10.	E.N.E.	2	bc	...	29.874	81.8	79.3	88	80.5	6	Cir.	Cum.	
Noon.	E.N.E.	2	bc	...	29.861	81.8	79.8	90	80.5	5	Cir.	Cum.	
2.	N.E.	2	bc	...	29.810	84.8	82.3	87	81.2	6	Cir.	Cum.	
4.	N.	1	bcp	...	29.798	81.5	79.8	91	81.2	7	...	Cum.	
6.	N.W.	2	bcp	...	29.829	84.8	80.8	100	...	6	Cir str.	Cum & Cumst	
8.	N.E.	2	bcmw	...	29.841	80.3	79.8	98	80.5	4	...	Cum.	
10.	N.N.E.	3	bcm	...	29.846	80.3	79.3	95	80.5	2	...	Cum & Str.	
Midlt.	N.N.E.	3	bcm	...	29.834	80.3	79.3	95	80.5	4	Cir.	Cum.	
Totals.	...	29	bcpm	9	10057	9.8	115.1	47	5.1	64	Cir & Str.	Cum., Str., & Cum str.	
Mean.	N.E. & N.	2		2	29.838	80.8	79.6	94	80.5	5			

## THURSDAY, 11TH.

2.	N.N.E.	3	bcm	...	29.796	80.5	79.5	95	79.5	6	Cir cum.	Cum.	At noon, lat. 4° 33' N. long. 129° 1' E. Temperature by self-registering thermo- meter, max. 83°, min. 77° 5. Current, N. 53°, E. 10'. Black bulb 124°. Swell from N. Sp. gr. 1.02589
4.	N.N.E.	3	bcm	...	29.799	79.8	79.8	100	79.5	5	...	Cum.	
6.	N.E.	3	bc	...	29.805	79.8	78.3	92	80.2	9	Cir.	Cum.	
8.	N.E.	3	bc	...	29.834	80.8	78.5	89	81.0	8	...	Cum & Str.	
10.	N.N.E.	3	bcm	2	29.825	80.8	79.8	95	81.7	8	...	Cum & Cumst	
Noon.	N.E.	3	bcm	2	29.820	82.5	79.8	86	83.0	9	...	Cum.	
2.	N.E. & N.	5	eqp	...	29.808	81.3	78.8	88	82.0	10	...	Cum & Nb.	
4.	N.E.	3	e	...	29.763	79.8	77.3	88	82.0	10	...	Cum & Cumst	
6.	N.E.	2	cp	...	29.763	79.8	78.8	95	81.5	10	...	Cum & Cumst	
8.	N.E.	1	bc	...	29.790	79.8	78.8	95	81.7	9	...	Cum & Str.	
10.	N.N.E.	3	bc	2	29.800	81.3	78.8	88	82.0	7	...	Cum.	
Midlt.	N.E.	2	bcp	2	29.771	80.3	79.3	95	82.0	10	...	Cum.	
Totals.	...	34	bcqpm	8	9604	6.5	107.5	1106	16.1	101	Cir.	Cum., Nb., & Cum str.	
Mean.	N.N.E.	3		2	29.800	80.5	78.9	92	81.3	8			

## FRIDAY, 12TH.

2.	N.E.	4	bcp	...	29.773	80.3	78.8	92	81.0	3	Cir.	Cum.	At noon, lat. 4° 19' N. long. 130° 15' E. Temperature by self-registering thermo- meter, max. 84°, min. 75°. 3.30 A.M., heavy nimbus and vivid lightning to eastward. Cum. Black bulb 132°. Sp. gr. 1.02616.
4.	N.E. & N.	1	bcp	...	29.752	79.8	78.8	95	80.2	8	...	Cum & Nb.	
6.	N.	2	opd	...	29.885	77.3	77.0	98	81.0	10	...	Cum & Nb.	
8.	N.	2	epd	...	29.816	77.8	77.8	100	82.0	9	...	Cum & Nb.	
10.	N.	1	bcp	...	29.798	78.8	78.8	100	81.7	10	...	Cum & Nb.	
Noon.	N.	2	bc	...	29.779	80.3	79.3	95	81.7	8	...	Cum.	
2.	N.	2	bc	3	29.744	83.5	80.3	84	81.7	8	...	Cum & Nb.	
4.	N.	6	opq	3	29.739	77.8	77.8	100	81.7	10	...	Nimb.	
6.	N.W.	2	opr	...	29.765	77.3	76.8	98	...	10	...	Cum & Cumst	
8.	N.E. & N.	2	cp	2	29.751	78.5	77.8	96	81.7	10	Str.	Cum & Cumst	
10.	N.N.E.	1	bc	1	29.803	78.8	77.3	93	81.5	8	...	Cum.	
Midlt.	N.N.E.	2	bc	1	29.793	78.8	77.8	95	81.0	9	...	Cum & Nb.	
Totals.	...	27	cpqpr	10	9309	169.0	98.3	66	15.2	103	Cir & Str.	Cum., Nb., & Cum str.	
Mean.	N.E.	2		2	29.776	79.1	78.2	95	81.4	9			

## SATURDAY, 13TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s'w.	3	ocr	2	29.744	77.8	77.3	97	81.0	10	...	Cum.	At noon, lat. 4° 18' N. long. 136° 53' E. Temperature by self-registering thermo- meter, max. 78° 5, min. 74° 0. Current, s. 76° E. 14'.
4.	N.	1	oc	2	29.748	77.3	76.8	97	81.0	10	...	Cum.	
6.	N.W.	1	cp	1	29.769	76.3	76.3	100	81.0	10	...	Cm.&Str.	
8.	w'b.N.	1	c	...	29.801	77.8	77.5	99	81.0	10	...	Cm.&Cumst	
10.	w.	2	edp	...	29.805	77.8	77.8	100	81.0	10	...	Cum.	
Noon.	s.s.w.	2	cdp	1	29.779	77.3	77.3	100	80.5	10	...	Cum.	
2.	s.s.w.	4	crq	1	29.747	76.3	75.8	97	80.5	10	...	Nimb.	
4.	s.w.	1	bcp	1	29.734	75.8	75.8	100	80.5	9	...	Cum.	
6.	s.w.	5	orq	2	29.751	76.8	76.8	100	81.0	10	...	Nimb.	
8.	s.w.	4	orq	...	29.777	76.3	76.3	100	81.0	10	...	Str.	
10.	s.w.	4	bc	2	29.785	78.0	77.3	95	81.0	6	...	Cm.&Str.	
Midt.	s.s.w.	3	bc	2	29.770	78.0	77.0	94	81.0	4	...	St.&Cirum.	
Totals.	...	31	eqr	14	9210	85.5	82.0	99	10.5	109	...	Cum., Nimb., & Str.	
Mean.	w'bs.	3		2	29.767	77.1	76.8	98	80.9	9			

## SUNDAY, 14TH.

2.	s.w.	3	bcm	2	29.748	78.8	77.8	95	80.7	7	...	Cum.	At noon, lat. 3° 36' N. long. 132° 47' E. Temperature by self-registering thermo- meter, max. 81° 5, min. 74° 5. Current, s. 76° E. 15'. Rain to 6 A.M. from 6 A.M. yesterday, 0.85 inches. Sp. gr. 1.02601.
4.	s.w.	2	bcm	2	29.748	78.8	77.8	95	81.0	9	...	Cum.	
6.	s.w.	1	cp	2	29.793	78.3	77.8	97	81.2	10	...	Cm.&Nb.	
8.	s.w.	2	cp	2	29.830	79.8	78.8	95	81.5	10	...	Cm.&Nb.	
10.	s.w.	1	c	...	29.852	80.3	78.8	93	81.8	10	...	Cm.&Nb.	
Noon.	s.s.w.	3	eqp	...	29.833	78.8	78.3	98	81.7	10	...	Cm.&Str.	
2.	s.s.w.	1	cp	1	29.775	80.8	77.8	85	82.0	10	...	Cm.&Str.	
4.	E.S.E.	1	c	...	29.765	80.5	79.0	93	82.0	10	...	Cm.&Str.	
6.	E.S.E.	1	c	1	29.799	79.8	78.8	95	81.8	10	...	Cm.&Cumst	
8.	s.e.	1	cpd	1	29.836	79.8	79.5	99	82.0	10	...	Cum.	
10.	s.s.w.	1	bcm	...	29.818	79.8	78.8	95	81.7	7	...	Cm.&Str.	
Midt.	s.s.w.	2	bcm	...	29.810	80.3	79.3	95	81.7	7	...	Cm.&Str.	
Totals.	...	19	eqpd	11	9607	115.8	102.5	55	19.1	110	...	Cum., Str., & Nimb.	
Mean.	s.	2		2	29.801	79.6	78.5	95	81.6	9	...		

## MONDAY, 15TH.

2.	s.s.w.	2	bcm	1	29.770	80.5	79.8	96	81.7	8	...	Cum.	At noon, lat. 3° 16' N. long. 133° 32' E. Temperature by self-registering thermo- meter, max. 84°, min. 78°. Current, s. 73° E. 24'. Rain to 6 A.M., none. Black bulb 120°. Sp. gr. 1.02623.
4.	s.w.b.s.	2	bcm	...	29.774	80.5	79.3	94	81.7	4	...	Cum.&N.b.	
6.	s.w.b.s.	2	bc	...	29.780	80.8	79.8	95	81.5	8	Cir.	Cum.&N.b.	
8.	s.w.b.s.	1	bc	...	29.881	80.8	79.8	95	82.0	5	Cir.	Cum.&N.b.	
10.	Variable.	1	bc	...	29.861	81.8	80.8	95	82.5	9	Cir cum.	...	
Noon.	Calm.	0	bc	...	29.830	83.8	81.8	90	83.5	6	Cir str.	Cum.	
2.	N.E.	1	bc	...	29.792	83.3	81.3	90	85.5	5	Cir.	Cum.	
4.	NE <sup>N</sup> .	0	bc	...	29.790	82.3	80.8	93	...	6	Cir.	Cum.	
6.	Variable.	0	bcpq	...	29.833	79.3	78.3	95	83.5	4	Cir str.	Cum.&Cmst	
8.	N.W.W.	1	bc	...	29.873	79.8	78.8	95	82.7	5	Cir cum.	Cum.&Str.	
10.	NE <sup>E</sup> .	2	bc	1	29.882	80.0	78.8	94	82.0	7	Cir str.	Cum.	
Midt.	NE <sup>E</sup> .	1	bc	1	29.870	79.8	79.3	98	80.5	3	Cr.&Crem.	...	
Totals.	...	13	bcqp	3	9936	12.7	118.6	50	27.1	70	Cir., Cir cum., & Cir str.	Cum. & Nimb.	
Mean.	Variable.	1		1	29.828	81.1	79.9	94	82.5	6	...		

## TUESDAY, 16TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and sea-level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	12	bc	...	29.833	80.3	78.8	93	82.2	3	...	Cum.	At noon, lat. 2° 56' S. long. 134° 11' E. Temperature by self-registering thermo- meter, max. 84°, min. 75°. Current, s. 45° E. 7°. Rain to 6 A.M., 73 inch.
4.	E.	3	bc	...	29.847	80.3	78.8	92	82.2	4	...	Cum.	
6.	N.E.	12	bc	...	29.861	80.8	79.8	95	82.5	3	Cir.	Cum.	
8.	E.N.E.	1	bc	...	29.899	81.8	80.8	95	82.5	8	...	Cir.&Cum	
10.	E.N.E.	12	bc	...	29.915	82.8	80.8	90	82.7	7	...	Cum.&Cum	1.30 p.m., wind shifted to s.w. through s. in a squall. Sp. gr. 1.02590.
Noon.	E.N.E.	12	bc	...	29.868	83.3	80.8	88	82.7	9	...	Cum.&Nb.	
2.	S.W.	1	or	2	29.811	77.8	77.8	100	82.0	10	...	Nimb.	
4.	Variable.	4	or	2	29.815	75.8	75.8	100	82.0	10	...	Cum.	
6.	N.E.	1	or	2	29.863	76.8	76.3	98	...	10	...	Nimb.	
8.	P.S.	1	op	1	29.845	77.8	77.0	96	81.7	10	...	Nimb.	
10.	E.S.	2	e	...	29.882	77.8	76.8	94	81.7	10	...	Cum.	
Midt.	E.	1	e	2	29.845	78.8	77.8	95	82.0	10	...	Cum.	
Totals.	...	22	bc & cqr	9	10254	114.1	101.3	56	24.6	94	Cir.	Cum. & Nimb.	
Mean.	E.S.	2		2	29.854	79.5	78.4	95	82.2	8			

## WEDNESDAY, 17TH.

2.	E.N.E.	1	e	1	29.829	79.3	77.8	93	82.0	10	...	Cum.&Cum	At noon, lat. 2° 42' S. long. 134° 56' E. Temperature by self-registering thermo- meter, max. 84°, min. 76°. Current s. 70° E. 12°. Swell from S.E. Rain to 6 A.M., 73 inch. Black bulb 135°. Sp. gr. 1.02610.
4.	E.S.	1	bc	1	29.843	78.3	76.8	91	82.0	3	...	Nimb.	
6.	N.E.	1	bc	...	29.849	79.8	78.8	95	82.2	4	Str.	Cum.	
8.	E.N.E.	2	bc	...	29.875	81.0	79.8	94	82.5	5	Cir.	Cum.	
10.	E.	2	bc	1	29.867	81.5	79.8	91	83.0	7	...	Cum.	
Noon.	E.S.	3	bc	1	29.934	82.0	80.0	90	83.0	4	Cir.	Cum.	
2.	E.S.E.	1	bc	1	29.799	82.3	80.8	92	83.0	6	Cir str.	Cum.	
4.	E.S.E.	3	bc	...	29.790	81.8	79.8	90	83.0	5	Cir str.	Cum.&Nb.	
6.	N.E.	2	bc	...	29.823	82.0	80.8	94	82.5	3	Cir str.	Cum.	
8.	N.E.	2	bc	...	29.847	81.3	80.3	95	82.5	4	Cir str.	Cum.	
10.	N.E.	2	bc	...	29.859	81.8	80.8	95	82.5	6	...	Cum.	
Midt.	N.E.	3	bc	...	29.836	81.5	80.3	94	82.5	5	Cir.	Cum.	
Totals.	...	23	bc	5	10119	12.6	115.8	34	30.7	62	Cir str.	Cum. & Nimb.	
Mean.	E.S.	2		1	29.846	81.1	79.6	93	82.6	5			

## THURSDAY 18TH.

2.	N.E.	1	bc	1	29.814	81.3	80.3	95	82.7	6	...	Cum.	At noon, lat. 1° 55' S. long. 135° 57' E. Temperature by self-registering thermo- meter, max. 83° 2', min. 78° 5'. Current, s. 37° W. 15°. Cum. s.e. swell. Rain to 6 A.M., none. Wind puffy and variable, with light rain showers from 8 p.m. to mid- night.
4.	N.E.	2	bc	...	29.802	80.8	79.8	95	82.5	9	...	Cum.	
6.	N.E.S.	1	bc	1	29.834	80.3	78.8	93	82.5	7	Cir cum.	Cum.	
8.	N.N.E.	3	bc	2	29.873	81.8	79.8	90	82.5	8	...	Cum.&Cum	
10.	N.N.E.	3	bc	...	29.869	81.5	80.0	93	82.7	9	Cir str.	Cum.	
Noon.	N.N.E.	4	bc	...	29.842	80.8	80.3	97	82.7	9	...	Cum.	
2.	N.N.E.	4	bc	2	29.786	81.8	79.8	90	83.0	9	...	Cum.&Str.	
4.	N.N.E.	3	e	2	29.774	81.5	80.0	93	82.7	19	...	Cum.&Cum	
6.	N.N.E.	4	e	2	29.807	79.8	78.8	95	82.5	9	Cir str.	Cum.&Cum	
8.	N.E.S.	3	bc	2	29.845	79.8	79.3	97	82.2	6	Cir.	Cum.&Str.	
10.	N.E.	4	bc	...	29.863	79.3	78.8	98	82.2	7	Cir cum.	Cum.&Str.	
Midt.	N.E.S.	1	cqr	...	29.858	78.8	78.3	97	82.2	10	...	Cum.&Str.	
Totals.	...	33	bc	12	9967	7.5	114.0	53	30.4	99	Cir cum. & Str.	Cum., Str., & Cum str.	
Mean.	N.E.S.	3		2	29.831	80.6	79.5	94	82.5	8			

## FRIDAY, 19TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Sat. 100.				Upper.	Lower.	
2.	NE <sup>1</sup> /N.	1	cp	...	29.786	78.5	78.5	100	82.7	9	...	...	Cum.	At noon, lat. 1° 0' N. long. 137° 11' E. Temperature by self-registering thermometer, max. 79° 5, min. 75° 0. Current, s. 29° W. 23'. 2.30 A.M., calm; 3 A.M., wind shifted to S.E. with heavy rain. 6 A.M., rain 74 inch. Sp. gr. 1.02573.
4.	S.E.	0	ciu	...	29.772	77.8	77.8	100	83.0	10	...	...	Nimb.	
6.	N.N.E.	1	e	...	29.802	76.8	76.8	100	82.0	10	...	...	Cum str.	
8.	E.N.E.	2	e	...	29.847	76.8	76.8	100	82.0	10	...	...	Cm. & Str.	
10.	E.N.E.	2	cp	1	29.854	78.3	77.8	97	82.5	10	...	...	Cum.	
Noon.	E.S.E.	1	cp	1	29.750	79.3	78.3	95	82.0	9	...	...	Cum.	
2.	Variable.	1	cp	...	29.766	77.8	77.8	100	82.0	10	...	...	Cm. & Str.	
4.	Variable.	0	cr	...	29.759	76.8	76.8	100	82.2	10	...	...	Cm. str. & Nib.	
6.	Variable.	2	or	...	29.794	77.3	77.3	100	82.0	10	...	...	Nimb.	
8.	N.N.E.	4	orq	...	29.814	76.8	76.8	100	82.0	10	...	...	Cm. & Nib.	
10.	N <sup>1</sup> /E.	3	e	...	29.852	77.8	77.8	100	82.0	10	...	...	Cum.	
Midt.	Variable.	1	ocr	1	29.867	76.3	75.8	97	81.5	10	...	...	Cum.	
Totals.	...	18	cyptr	5	97.03	90.3	88.3	1189	25.9	118	...	...	Cum., Str., & Nimb.	
Mean.	NE <sup>1</sup> /E.	1		1	29.809	77.5	77.4	99	82.2	10	...	...	Cum., Str., & Nimb.	

## SATURDAY, 20TH.

2.	N E $\frac{1}{2}$ N.	1	cp	...	29.818	76.8	76.3	97	81.0	10	...	Cm. & Str.	At noon, lat. 0° 21' N. long. 138° 11' E. Temperature by self-registering thermometer, max. 78°, min. 72° 5. Current, s. 10° E. 21'. 6 A.M., rainfall 1.21 inches. 9 to 11 A.M., continuous heavy rain. Many logs of driftwood round the ship. Rain from 6 A.M. to 6 P.M., 2.50 inch. Halo round the moon.
4.	E N $\frac{1}{2}$ E.	3	cp	...	29.805	76.8	76.3	97	...	10	...	Cm. & Str.	
6.	N $\frac{1}{2}$ E.	4	opq	...	29.821	77.8	76.8	94	81.7	10	...	Cm. & Cum str.	
8.	N W $\frac{1}{2}$ W.	3	opq	...	29.853	77.8	77.0	95	82.0	10	...	Cum. str. & Cum.	
10.	N $\frac{1}{2}$ E.	1	crq	...	29.880	75.8	76.8	100	81.5	10	...	Cm. & Nib.	
Noon.	Variable.	2	crq	...	29.891	74.8	74.8	100	81.5	10	...	Cm. & Nib.	
2.	Variable.	1	or	1	29.834	74.8	74.8	100	81.2	10	...	Nimb.	
4.	Variable.	0	or	...	29.816	74.8	74.8	100	81.2	10	...	Str. & Nib.	
6.	N $\frac{1}{2}$ E.	1	e	...	29.833	75.8	74.8	94	81.0	10	...	Cum.	
8.	N N E $\frac{1}{2}$ E.	2	e	...	29.826	76.3	75.8	97	81.0	10	...	Cm. & Str.	
10.	N E $\frac{1}{2}$ E.	1	e	...	29.876	76.8	76.3	97	81.2	10	...	Cum.	
Midt.	Calm.	0	e	...	29.870	76.8	75.8	94	81.2	10	Cir cum.	Cum.	
Totals.	...	19	cyptr	...	10123	75.1	70.3	85	14.5	...	...	Cir cum.	Cum., Str., & Nimb.
Mean.	N. N. E.	2		1	29.844	76.3	75.9	97	81.3	10	...	Cir cum.	Cum., Str., & Nimb.

## SUNDAY, 21ST.

2.	Calm.	0	e	...	29.831	75.8	75.3	97	81.2	10	...	Cum. & Cum.	At noon, lat. 0° 4' s. long. 138° 20' p. Temperature by self-registering thermo- meter, max. 85° min. 74°. Current, s. 10° E. 22'. Rain from 6 p.m. to 6 a.m., none. Sp. gr. 1.02522. A shark and dolphin seen. Numerous logs of driftwood in sight. Several land birds seen in the afternoon, and a water-snake caught.	
4.	ssw <sup>1</sup> /w.	1	he	...	29.814	75.8	75.3	97	81.2	8	...	Cum. & Nib.		
6.	sw <sup>1</sup> /w.	0	e	...	29.860	77.8	75.8	89	81.2	10	...	Cum. & Cum str.		
8.	ssw <sup>1</sup> /w.	1	cp	...	29.869	77.8	76.3	91	81.2	10	...	Cum str. & Cum str.		
10.	Variable.	0	cp	...	29.861	77.8	77.3	97	81.2	10	...	Cum. & Str.		
Noon.	Variable.	1	e	...	29.840	79.3	78.0	94	82.0	10	Cir str.	Cum. & Str.		
2.	N <sup>1</sup> /E.	0	bed	...	29.815	79.3	78.8	97	82.0	10	Cir str.	Cum.		
4.	w <sup>1</sup> /N.	1	he	...	29.803	81.8	79.8	90	82.0	6	Cir & Circum.	Cum.		
6.	N <sup>1</sup> /E.	0	be	...	29.815	80.3	78.8	93	82.5	5	Cir str.	Cum. & Cum str.		
8.	E <sup>1</sup> /S <sup>1</sup> /N.	1	be	...	29.850	79.3	77.8	93	82.0	5	Cir str.	Cum.		
10.	E <sup>1</sup> /S.	0	e	...	29.854	79.5	77.8	91	82.0	10	Cir cum.	Cum.		
Midt.	E <sup>1</sup> /S.	1	he	...	29.827	79.5	78.3	94	82.0	6	Cir str.	...		
Totals.				...	6	...	10039	104.0	89.3	43	20.5	100	Cir str.	Cum., Str., & Cum str.
Mean.				Variable.	1	...	29.837	78.7	77.4	94	81.7	8	Cir str.	Cum., Str., & Cum str.

## MONDAY, 22d FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	c	...	29.809	79.3	77.8	93	82.2	10	...	Cum.	At noon, lat. 0° 40' s. long. 138° 59' E. Temperature by self-registering thermo- meter, max. 85°, min. 78°. Current, s. 42°, w. 15°. Rain to 6 A.M., .94 inch. Large quantities of driftwood passed during the day, and some sharks, dolphins, and whales seen, in addi- tion to gannet and small sea birds. Sp. gr. 1.02537. Lightning to s.
4.	Calm.	0	c	...	29.792	79.3	77.8	92	82.2	10	...	Cum.	
6.	ssw $\frac{1}{2}$ w.	1	c	...	29.829	79.8	78.8	95	82.5	10	...	Cum.	
8.	w $\frac{1}{2}$ s.	0	be	1	29.871	80.8	79.3	93	83.0	8	...	Cir.	
10.	NE $\frac{1}{2}$ E.	1	cp	...	29.872	79.8	79.3	97	83.0	9	...	Cum.	
Noon.	Calm.	0	be	...	29.837	82.3	80.3	90	84.0	9	Cir str.	Cum.	
2.	Variable.	0	be	...	29.869	82.8	80.8	90	88.2	8	Cir str.	Cum.	
4.	Calm.	0	be	...	29.768	81.5	80.5	95	86.2	5	Cir str.	Cum.	
6.	SE $\frac{1}{2}$ E.	1	be	...	29.807	82.8	80.8	90	83.2	4	Cir str.	Cum.	
8.	SE $\frac{1}{2}$ E.	0	bel	1	29.833	81.3	80.3	95	82.7	3	...	Cum.	
10.	SE $\frac{1}{2}$ E.	2	bel	...	29.841	81.3	80.3	95	82.7	3	...	Cum.	
Midt.	SE $\frac{1}{2}$ E.	1	be	...	29.848	80.8	80.3	97	82.5	7	Cir cum.	Cum.	
Totals.	...	6		2	29.82	11.8	116.3	42	42.6	86			
Mean. Variable.	1		bel	1	29.832	81.0	79.7	93	83.6	7	Cir str.	Cum. & Cum str.	

## TUESDAY, 23d.

2.	SE $\frac{1}{2}$ E.	1	cl	...	29.805	80.8	79.8	95	82.5	8	...	Cum & Str	At noon, lat. 1° 47' s. long. 140° 21' E. Temperature by self-registering thermo- meter, max. 81°, min. 75° 5. Rain to 6 A.M., .97 inch. Sp. gr. 1.02420. 7 P.M., anchored in Humboldt bay, New Guinea.
4.	NE $\frac{1}{2}$ E.	1	be	...	29.806	80.8	79.8	95	82.5	8	...	Cum & Str	
6.	NE $\frac{1}{2}$ E.	0	be	...	29.849	79.8	79.3	97	82.5	9	Cir str.	Cum.	
8.	sw $\frac{1}{2}$ w.	4	cp	...	29.878	76.8	76.8	100	82.5	10	...	Cum & Str	
10.	w $\frac{1}{2}$ s.	0	cp	1	29.899	76.8	74.8	93	82.0	10	...	Nimb.	
Noon.	sw $\frac{1}{2}$ w.	2	cp	1	29.857	76.8	76.8	100	82.7	10	...	Cum & Str	
2.	sw $\frac{1}{2}$ w.	0	c	...	29.798	77.8	77.3	97	82.2	10	...	Cum & Str	
4.	sw $\frac{1}{2}$ w.	1	c	...	29.778	78.8	77.8	95	82.5	10	...	Cum & Str	
6.	w $\frac{1}{2}$ s.	1	c	...	29.777	78.8	78.0	96	82.5	10	...	Cum & Str	
8.	NE $\frac{1}{2}$ E.	1	bel	...	29.840	79.3	78.8	97	...	10	Str.	Cum.	
10.	SE $\frac{1}{2}$ E.	1	cl	...	29.855	79.8	77.8	90	...	10	...	Cum.	
Midt.	SE $\frac{1}{2}$ E.	1	bel	...	29.854	78.8	77.8	95	...	8	...	Cum.	
Totals.	...	13		2	29.86	104.6	94.8	71	21.9	113			
Mean. Variable.	1		bel	1	29.833	78.7	77.9	96	82.4	9	Cir str.	Cum., Str., & Nimb.	

## WEDNESDAY, 24th.

2.	SE $\frac{1}{2}$ s.	1	be	...	29.827	78.5	78.3	97	...	4	...	Cum.	At Humboldt bay. Temperature by self-registering thermo- meter, max. 85° 7, min. 76° 0. Rain to 6 A.M., .46 inch. 5.39 P.M., left Humboldt bay.
4.	s $\frac{1}{2}$ w.	0	be	...	29.825	77.8	77.8	100	...	2	Str.	Cum.	
6.	ssw $\frac{1}{2}$ w.	1	be	...	29.862	77.3	77.3	100	83.5	9	...	Cum.	
8.	s $\frac{1}{2}$ w.	1	be	...	29.911	81.8	80.3	93	...	6	Cir cum.	Cum.	
10.	E $\frac{1}{2}$ s.	1	be	...	29.899	83.3	80.8	88	...	7	Cir.	Cum.	
Noon.	NNE $\frac{1}{2}$ E.	1	be	...	29.865	83.3	81.8	90	...	6	Cir.	Cum.	
2.	NNE $\frac{1}{2}$ E.	3	be	...	29.867	83.8	82.3	92	...	5	Cir.	Cum.	
4.	NNE $\frac{1}{2}$ E.	1	be	...	29.781	82.8	81.5	94	...	7	Cir.	Cum.	
6.	NNE $\frac{1}{2}$ E.	2	be	...	29.809	82.8	80.8	95	...	6	Str.	Cum.	
8.	NE $\frac{1}{2}$ E.	1	be	...	29.863	81.8	80.8	95	...	2	Str.	Cum.	
10.	NE $\frac{1}{2}$ E.	0	be	...	29.887	82.3	80.8	93	84.0	3	...	Cum.	
Midt.	NE $\frac{1}{2}$ E.	1	be	...	29.875	81.8	80.8	95	83.5	6	Cir.	Cum.	
Totals.	...	13		...	102.5	18.6	3.3	45	11.0	63			
Mean. Variable.	1		be	...	29.859	81.6	80.3	94	83.7	5	Cir str.	Cum.	

## THURSDAY, 25TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Std. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE $\frac{1}{2}$ E.	3	ciq	...	29.853	79.3	78.8	97	83.0	10	...	Cum.	At noon, lat. 2° 11' s. long. 141° 25' E. Temperature by self-registering thermo- meter, max. 84°, min. 75° 5. Current, w. 6'. Rain to 6 A.M., 0.26 inch. Black bulb 140°. Sp. gr. 1.02586.
4.	E $\frac{1}{2}$ S.	0	bcp	...	29.849	78.5	78.5	100	83.0	8	...	Cum.	
6.	WN.	4	cqr	...	29.866	76.8	76.8	100	82.2	10	...	Cm.&Nb.	
8.	WbS.	2	bc	...	29.929	76.8	76.8	100	82.5	8	...	Cir.	
10.	WbS.	1	bc	...	29.917	78.8	77.8	95	83.5	8	...	Cir.	
Noon.	WbS.	1	bc	...	29.887	80.3	78.8	93	84.0	5	Cir cum.	Cum.	
2.	Variable.	0	bc	...	29.824	82.3	80.8	93	84.7	4	Cir str.	Cum.	
4.	NbW $\frac{1}{2}$ W	2	bc	...	29.811	83.3	81.8	93	84.7	6	Cir.	Cum.	
6.	NbW $\frac{1}{2}$ W	1	bc	...	29.870	81.8	81.3	98	83.7	4	Cir.	Cum.	
8.	N $\frac{1}{2}$ W.	2	bc	...	29.859	81.0	80.8	99	83.0	3	...	Cum.	
10.	NbW $\frac{1}{2}$ W.	1	bc	...	29.895	80.8	80.3	97	82.5	3	...	Cum.	
Midt.	NW $\frac{1}{2}$ N.	2	bc	...	29.889	80.8	79.8	95	82.5	5	Cir.	Cum.	
Totals.	...	19	...	...	10479	0.5	112.3	80	39.3	74	...	...	
Mean.	Variable.	2	bcp	...	29.873	80.0	79.4	97	83.3	6	Cir.	Cum.	

## FRIDAY, 26TH.

2.	NbW $\frac{1}{2}$ W.	1	bc	...	29.845	80.8	80.3	97	83.0	6	Cir.	Cum.	At noon, lat. 2° 0' s. long. 142° 23' E. Temperature by self-registering thermo- meter, max. 85°, min. 79°. Current, s. 73' E. 15'. Rain to 6 A.M., none. Black bulb 138°. Sp. gr. 1.02593.
4.	NW $\frac{1}{2}$ W.	2	bc	...	29.833	80.8	79.8	95	82.7	3	...	Cum.	
6.	NbW $\frac{1}{2}$ W	1	bc	...	29.848	79.8	79.5	99	83.0	7	Cir.	Cum.	
8.	NbW $\frac{1}{2}$ W	2	bc	...	29.889	80.8	79.5	94	83.0	8	...	Cm.&Cum	
10.	NW $\frac{1}{2}$ N.	1	bc	...	29.875	82.8	81.3	92	84.0	6	Cir.	Cum.	
Noon.	NbW $\frac{1}{2}$ W	1	bc	...	29.845	82.8	80.8	90	84.5	6	Cir & Cum	Cum.	
2.	N $\frac{1}{2}$ E.	1	bc	...	29.811	82.8	81.3	92	84.5	7	Cir.	Cum.	
4.	N $\frac{1}{2}$ E.	2	bc	...	29.800	82.8	82.3	98	84.0	6	...	Cm.&Str.	
6.	N $\frac{1}{2}$ W.	2	bc	...	29.834	81.3	80.2	94	83.7	6	Cir.	Cum.	
8.	N $\frac{1}{2}$ W.	3	bcl	1	29.836	81.3	80.3	95	83.0	4	...	Cum.	
10.	N $\frac{1}{2}$ E.	2	bcl	...	29.862	80.8	80.3	97	83.0	4	...	Cum.	
Midt.	NbE $\frac{1}{2}$ E.	1	bc	...	29.840	80.8	80.3	98	83.2	3	Cir cum.	Cum.	
Totals.	...	19	...	...	10118	17.6	5.9	61	41.6	66	Cir. & Cir cum.	Cum.	
Mean.	N. N. W.	2	bcl	1	29.843	81.5	80.5	95	83.5	6	...	...	

## SATURDAY, 27TH.

2.	N $\frac{1}{2}$ E.	1	bc	...	29.827	80.8	79.8	95	83.0	5	Cir.	Cum.	At noon, lat. 2° 0' s. long. 143° 36' E. Temperature by self-registering thermo- meter, max. 83° 5, min. 77° 5. Current, s. 49' E. 12'. Rain to 6 A.M., .03 inch. Sp. gr. 1.02594.
4.	N $\frac{1}{2}$ E.	1	bc	...	29.819	80.8	80.3	97	83.0	8	...	Cum.	
6.	N $\frac{1}{2}$ W.	1	bc	...	29.845	79.3	78.8	98	83.0	6	Cir str.	Cum.	
8.	N $\frac{1}{2}$ E.	1	bc	...	29.878	80.5	79.8	96	83.2	8	Cir str.	Cm.&Nb.	
10.	WN.	1	bc	...	29.873	80.3	80.3	100	83.5	6	Cir.	Cum.	
Noon.	N $\frac{1}{2}$ E.	3	bcp	...	29.846	79.8	79.8	100	83.5	10	...	Cum.	
2.	NbE $\frac{1}{2}$ E.	1	bc	...	29.772	82.5	81.5	95	84.2	7	Cir str.	Cum.	
4.	NNE $\frac{1}{2}$ E.	3	bc	...	29.761	81.8	81.5	99	84.0	6	Cir.	Cm.&Cum.st	
6.	NNE $\frac{1}{2}$ E.	2	bc	...	29.783	80.8	80.3	98	84.0	5	Cir.	Cum.	
8.	NNE $\frac{1}{2}$ E.	2	bc	...	29.818	81.3	80.8	97	84.0	8	...	Cum.	
10.	NNE $\frac{1}{2}$ N.	2	bcp	1	29.848	79.8	79.8	100	83.5	10	...	Cm.&Cum.st	
Midt.	NNE $\frac{1}{2}$ E.	1	bcl	1	29.840	79.8	79.8	100	83.0	8	...	Cum.	
Totals.	...	19	...	2	9910	7.5	2.5	95	41.9	87	Cir str.	Cum., Nimb., & Cum str.	
Mean.	N $\frac{1}{2}$ E.	2	bcp	1	29.826	80.6	80.2	98	83.5	7	...	...	

## SUNDAY, 28TH FEBRUARY 1875.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. in 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E. by E.	1	e	...	29.803	77.8	77.8	100	83.0	9	...	Cum.	At noon, lat. 2° 25' S., long. 143° 58' E. Temperature by self-registering thermo- meter, max. 82°, min. 76°. Current, S. 55° W. 12'. Rain to 6 A.M., .40 inch. Sp. gr. 1.02600.
4.	S.W. by E.	2	cp	...	29.794	79.3	79.3	100	83.0	10	...	Cum.	
6.	S.W. by E.	1	cp	...	29.825	79.3	79.3	100	83.0	10	...	Cm. & Cumst.	
8.	E. by S.	1	cp	...	29.862	80.8	80.0	96	83.7	10	...	Cm. & Cumst.	
10.	Variable.	2	cpt	...	29.893	78.8	78.8	100	83.7	10	...	Cm. & Nhb.	
Noon.	Variable.	0	cp	...	29.846	78.3	78.3	100	83.5	10	...	Cumst. & Nhb.	
2.	S.W. by E.	1	e	...	29.800	80.5	79.8	96	83.7	10	...	Cum.	
4.	S.W. by E.	1	cp	1	29.793	79.8	79.8	100	83.5	10	...	Cum.	
6.	E. by S.	2	bc	...	29.797	80.3	79.3	95	83.5	4	Cir str.	Cum.	
8.	E. by S.	0	bc	...	29.810	81.3	79.3	90	83.0	2	Cir str.	...	
10.	S.E. by E.	1	b	...	29.779	80.8	79.8	95	83.0	0	...	...	
Midt.	S.E. by E.	1	bl	...	29.847	80.8	79.5	94	83.0	0	...	...	
Totals.	...	16	bcpl	...	99.49	117.8	111.0	86	39.6	85	Cir str.	Cum., Cum str., & Nimb.	
Mean.	E. by S.	1		1	29.829	79.8	79.3	97	83.3	7			

## MONDAY 1st MARCH.

2.	S.E. by E.	1	bc	...	29.818	80.8	79.8	95	83.2	5	Cir str.	Nimb.	At noon, lat. 2° 33' s. long. 144° 4' E. Temperature by self-registering thermo- meter, max. 85°, min. 77°. Current, s. 49° w. 19'. Rain to 6 A.M., .04 inch Observed several flying fish. Sp. gr. 1.02554.
4.	S.E. by E.	2	bcpl	...	29.813	79.8	78.8	95	83.2	8	...	Cum. & Cum.	
6.	S.E. by E.	2	cd	...	29.873	78.8	78.8	100	83.5	10	...	Cum. & Cumst.	
8.	E. by S.	1	bc	...	29.887	80.8	80.3	93	83.7	5	Cir.	Cum.	
10.	S.W. by S.	1	bc	...	29.900	82.8	81.8	95	83.7	5	Cir.	Cum.	
Noon.	S.W. by S.	1	bc	...	29.877	82.8	82.3	93	84.0	6	Cir.	Cum str.	
2.	E. by S.	1	bc	...	29.809	84.3	83.8	98	83.7	9	...	Cum. & N.b.	
4.	E. by S.	3	bcpp	...	29.795	81.0	80.8	99	84.0	7	...	Cum. & N.b.	
6.	S.W. by E.	2	bc	...	29.826	81.5	81.5	98	83.7	3	Cir str.	Cum.	
8.	S.W. by E.	3	bc	...	29.828	80.8	79.8	95	83.2	6	...	Cum.	
10.	E. by S.	1	bc	...	29.847	80.8	79.8	95	83.0	2	Cir str.	...	
Midt.	S.W. by E.	1	bc	...	29.854	80.8	80.8	100	83.0	3	Cir str.	...	
Totals.	...	19	bcqpl	...	161.27	16.3	8.3	81	41.9	69	Cir str.	Cum., Cum str., & Nimb.	
Mean.	E.	2		...	29.844	81.4	80.7	97	83.5	6			

## TUESDAY, 2d.

2.	S.W. by E.	1	bc	...	29.810	79.8	79.8	100	82.5	5	...	Nimb.	At noon, lat. 1° 52' S. long. 145° 23' E. Temperature by self-registering thermo- meter, max. 82°, min. 75°. Rain to 6 A.M., .34 inch. Sp. gr. 1.02591.		
4.	N.E. by N.	2	cpdt	...	29.811	77.3	77.3	100	82.2	10	Cir cum.	Nimb.			
6.	N.W. by W.	5	opl	...	29.851	77.8	77.8	100	82.2	10	...	Cm. & Nhb.			
8.	N.E. by E.	2	or	...	29.882	77.8	77.0	95	82.2	10	...	Cm. & Str.			
10.	N.W. by W.	2	cr	...	29.890	77.3	77.3	100	83.7	10	...	Cm. & Str.			
Noon.	S.W. by E.	0	cr	...	29.880	76.3	75.8	97	83.2	10	...	Cm. & Str.			
2.	N.W. by E.	3	cp	...	29.790	77.3	76.8	97	83.5	10	Str.	Cum.			
4.	N.W. by E.	1	e	...	29.775	78.8	78.3	98	83.2	9	...	Cmst. & Nhb.			
6.	N.W. by E.	2	e	...	29.862	80.3	78.3	90	83.5	10	...	Cm. & Str.			
8.	N.W. by E.	2	bc	...	29.841	80.8	79.8	95	83.5	8	...	Cm. & Str.			
10.	N.W. by W.	3	bc	...	29.841	79.8	79.3	98	83.2	4	...	Cum.			
Midt.	N.W. by E.	1	bc	...	29.833	79.8	79.8	100	83.2	4	...	Cum.			
Totals.				...	24	oprlt	...	160.69	103.1	97.3	90	36.1	100	Cir cum. & Str.	Cum., Str., & Nimb.
Mean.				N. N. E.	2	...	...	29.834	78.6	78.1	98	83.0	8		

WEDNESDAY, 3d MARCH 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometric corrected to sea-level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	N <sup>NE</sup> ½E.	1	bc	...	29.810	80.8	79.8	95	83.5	6	...	Cum.st.&Nb.	At noon, lat. 1° 41' S. long. 146° 39' E. Temperature by self-registering thermo- meter, max. 81° 5, min. 74° 0.
4.	E <sup>N</sup> ½S.	1	bc	...	29.781	80.3	79.3	85	84.0	7	...	Cum.st.&Nb.	
6.	SW <sup>W</sup> ½W.	1	cp	...	29.812	77.8	77.8	100	83.0	10	...	Cum.&Nb.	Rain to 6 A.M., .52 inch. Sp. gr. 1.02583.
8.	SW <sup>W</sup> ½W.	3	cp	...	29.874	77.3	77.3	100	83.0	10	...	Cum.&Nb.	
10.	SW <sup>W</sup> ½W.	1	cp	...	29.872	77.0	76.8	99	83.0	10	...	Cum.&Nb.	6 P.M., anchored in Nares harbour. Admiralty island.
Noon.	W <sup>SW</sup> ½S.	3	cr	...	29.852	75.8	75.8	100	82.5	10	...	Cum.&Nb.	
2.	SW <sup>W</sup> ½W.	3	cr	...	29.820	76.8	76.8	100	83.0	10	...	Cum.	
4.	N½E.	3	cd	...	29.800	77.3	76.8	97	83.2	10	...	Cum.&Str.	
6.	N½E.	1	e	...	29.789	77.8	77.3	97	83.2	10	...	Cum.	
8.	NW <sup>W</sup> ½W.	2	bc	...	29.813	77.5	76.8	96	...	7	...	Cum.&Str.	
10.	N½E.	1	bc	...	29.862	78.8	77.5	94	...	7	...	Cum.&Str.	
Midt.	Calm.	0	bc	...	29.835	78.8	77.8	95	...	4	...	Cum.&Str.	
Totals.	...	21	cp	...	9920	96.0	89.8	88	28.4	101	...	Cum., Str., & Nimb.	
Mean.	N.	2		...	29.827	78.0	77.5	97	83.2	8	...		

THURSDAY, 4TH.

2.	sw½w.	0	bc	...	29.803	78.3	77.8	97	...	3	...	Cum.	In Nares harbour. Temperature by self-registering thermo- meter, max. 84°, min. 76°.
4.	s½w.	1	bc	...	29.793	77.8	77.8	100	...	4	...	Cum.	
6.	Calm.	0	bc	...	29.825	78.8	78.8	100	83.0	3	...	Cum.	Rain to 6 A.M., .91 inch.
8.	N½E.	1	bc	...	29.859	80.5	79.3	94	...	10	...	Cum.	
10.	N½E.	2	bc	...	29.863	81.5	80.0	93	...	4	Cir str.	Cum.	
Noon.	N½E.	1	bc	...	29.845	81.8	80.3	92	...	7	Cir str.	Cum.	
2.	N½E.	2	bc	...	29.808	82.8	80.8	90	...	4	Cir cum.	Cir str.	
4.	N½E.	2	cq	...	29.809	82.3	81.8	98	...	8	...	Nimb.	
6.	N½E.	5	orq	...	29.854	77.8	77.8	100	83.2	10	...	Cum.st.&Nb.	
8.	N½E.	1	oe	...	29.857	78.8	78.8	100	...	10	...	Cum.	
10.	NN½E.	2	e	...	29.890	78.8	78.8	100	...	10	...	Cum.&Str.	
Midt.	N½E.	3	cq	...	29.874	78.3	77.8	98	...	10	...	Cum.	
Totals.	...	20	bc	...	10080	117.5	109.8	82	...	83	...	Cum., Str., & Nimb.	
Mean.	N.	2		...	29.840	79.8	79.1	97	83.1	7	Cir str.		

FRIDAY, 5TH.

2.	N½E.	3	e	...	29.841	78.3	77.3	94	...	10	...	Cum.	In Nares harbour. Temperature by self-registering thermo- meter, max. 83°, min. 76°.
4.	W½N.	1	o-p	...	29.832	78.8	77.8	95	...	10	...	Cum.	
6.	Variable.	0	oe	...	29.846	78.8	78.8	100	83.7	10	...	Cum.&Cum.st.	Rain to 6 A.M., .72 inch.
8.	NN½E.	1	o-p	...	29.888	77.8	76.8	94	...	10	...	Cum.st.&Nb.	
10.	SW½W.	1	e	...	29.908	78.3	78.3	100	...	8	...	Cum.&Str.	
Noon.	E½S.	1	o	...	29.878	79.5	79.0	97	...	10	...	Cum.&Str.	
2.	N½E.	2	oe	...	29.832	81.3	80.3	95	...	10	...	Cum.&Str.	
4.	N½E.	1	e	...	29.821	81.8	80.8	95	...	10	...	Cum.&Str.	
6.	N½E.	2	e	...	29.852	81.8	80.5	93	84.0	10	...	Cum.	
8.	NN½E.	1	e	...	29.875	81.8	80.8	95	...	9	...	Cum.&Cum.st.	
10.	NN½E.	3	bc	...	29.904	81.8	80.8	95	...	8	Cir.	Cum.	
Midt.	N½E.	2	er	...	29.885	80.8	80.8	100	...	10	...	Cum.	
Totals.	...	18	cp	...	10362	9.8	112.0	73	...	115	...	Cir.	Cum., Str., & Cum str.
Mean.	Variable.	1		...	29.864	80.1	79.3	96	83.8	9	...		

## SATURDAY, 6TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.		Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	N.E.	2	cp	...	29.841	80.8	80.5	99	...	10	...	Cum.	...	In Nares harbour. Temperature by self-registering thermo- meter, max. 81° 5, min. 76° 5. Rain to 6 A.M., .42 inch.
4.	N.E.	12	cqr	...	29.825	79.8	79.0	96	...	10	...	Nb.&Cm.	...	
6.	N.E.	5	c	...	29.854	79.0	78.8	99	84.0	10	...	Cm.&Cm.st	...	
8.	N.W. & N.	1	e	...	29.886	79.8	79.3	98	...	10	...	Cm.&Str.	...	
10.	N.E.	1	cp	...	29.912	79.8	78.8	95	...	10	...	Cm.&Str.	...	
Noon.	N.W. & W.	4	org	...	29.883	76.8	75.8	94	...	10	...	Cm.st.&Nb.	...	
2.	N.W. & W.	1	e	...	29.812	78.8	78.3	98	...	10	...	Cm.&Cm.st	...	
4.	Variable.	0	e	...	29.798	78.8	78.3	97	...	10	...	Cm.&Str.	...	
6.	Calm.	0	be	...	29.793	78.8	78.3	98	83.7	...	...	Cum str.	...	
8.	Calm.	0	be	...	29.816	79.8	78.8	95	...	...	...	Cum str.	...	
10.	N.W. & N.	1	e	...	29.847	80.8	80.0	96	...	10	...	Cm.&Cm.st	...	
Midt.	N.W. & W.	2	e	...	29.838	80.8	80.0	96	...	10	...	Cum.	...	
Totals.	...	19	cqr	...	10105	113.8	105.9	81	...	114	...	Cum.,	...	Cm str., & Nimb.
Mean.	N.N.W.	2		...	29.842	79.5	78.8	97	83.8	9	...	...	...	

## SUNDAY, 7TH.

2.	N.W. & N.	1	e	...	29.797	80.8	79.8	95	...	10	...	Cum.	...	In Nares harbour. Temperature by self-registering thermo- meter, max. 86° 5, min. 75° 5. 6 A.M., rain .44 inch.
4.	N.W. & N.	2	be	...	29.782	81.3	80.8	98	...	8	...	Cum.	...	
6.	N.W. & N.	1	e	...	29.814	80.8	80.5	99	84.0	10	...	Cm.&Cm.st	...	
8.	N.W. & N.	2	be	...	29.860	82.8	81.0	91	...	9	...	Cm.&Str.	...	
10.	W. & N.	5	cp	...	29.863	80.8	80.0	96	...	9	...	Nimb.	...	
Noon.	N.W. & W.	2	be	...	29.816	81.3	80.2	95	...	1	...	Cm.&Str.	...	
2.	N.E.	3	be	...	29.780	82.3	80.8	92	...	9	...	Cm.&Cm.st	...	
4.	N.W.	3	e	...	29.770	81.8	80.3	93	...	10	...	Cm.&Cm.st	...	
6.	N.W. & N.	2	be	...	29.796	81.3	80.3	95	83.7	9	...	Cm.&Str.	...	
8.	N.W. & N.	3	e	...	29.809	81.8	80.8	95	...	10	...	Cm.st.&Nb.	...	
10.	N.E.	4	e	...	29.841	81.8	80.8	95	...	9	...	Cum.	...	
Midt.	N.E.	1	e	...	29.822	81.3	80.8	97	...	9	...	Cum.	...	
Totals.	...	29	bcp	...	9750	18.1	6.1	61	...	103	...	Cir cum. & Str.	Cum., Str., & Cum str.	
Mean.	N.W. & N.	2		...	29.812	81.5	80.5	95	83.8	9	...	...	...	

## MONDAY, 8TH.

2.	N.N.E. & E.	2	be	...	29.777	81.3	80.8	97	...	7	...	Cum.	...	In Nares harbour. Temperature by self-registering thermo- meter, max. 86° 5, min. 80°. Rain to 6 A.M., .02 inch.
4.	N.N.E. & E.	2	oe	...	29.755	81.3	81.0	98	...	10	...	Cm.&Str.	...	
6.	N.E. & N.	1	e	...	29.819	81.3	80.8	97	83.7	10	...	Cm.&Cm.st	...	
8.	N.N.E. & E.	1	be	...	29.858	81.8	81.3	98	...	8	...	Cm.&Cm.st	...	
10.	N.E.	2	be	...	29.857	82.8	82.3	98	...	8	...	Cm.&Str.	...	
Noon.	N.E. & E.	1	be	...	29.835	83.8	83.3	97	...	9	...	Cir str.	Cum.	
2.	Calm.	0	be	...	29.804	84.3	83.8	98	...	8	...	Cm.&Cm.st	...	
4.	N.E.	1	e	...	29.781	82.8	82.3	97	...	10	...	Cm.&Cm.st	...	
6.	Variable.	0	e	...	29.799	83.0	82.8	99	83.7	10	...	Cum.	...	
8.	N.E.	1	e	...	29.810	82.8	82.8	100	...	9	...	Cm.&Str.	...	
10.	N.E.	1	e	...	29.854	82.3	81.8	98	...	10	...	Cm.&Str.	...	
Midt.	N.E. & E.	1	e	...	29.864	81.8	81.8	100	...	10	...	Cum.	...	
Totals.	...	13	be	...	9813	29.3	24.8	97	...	109	...	Cir str.	Cum., Str., & Cum str.	
Mean.	N.N.E.	1		...	29.815	82.4	82.1	98	83.7	9	...	...	...	

## TUESDAY, 9TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	eq	...	29.801	81.5	81.5	98	...	7	...	Cum.	In Nares harbour. Temperature by self-registering thermometer, max. 86°, min. 78° 2.
4.	Calm.	0	c	...	29.797	79.8	80.0	99	...	8	...	Cum.	
6.	E.S.	1	be	...	29.811	79.8	79.8	100	83.7	8	Cir cum.	Cum.	Rain to 6 A.M., none.
8.	Calm.	0	c	...	29.877	80.8	80.3	97	...	10	Cir cum.	Cum.	
10.	sw $\frac{1}{2}$ w.	1	be	...	29.887	81.3	80.8	98	...	8	...	Cum.	
Noon.	sw $\frac{1}{2}$ s.	1	be	...	29.869	83.8	81.8	99	...	7	Cir str.	Cum.	
2.	sw $\frac{1}{2}$ s.	2	be	...	29.784	85.0	84.0	95	...	7	Cir str.	Cum.	
4.	sw $\frac{1}{2}$ s.	1	be	...	29.776	84.8	83.8	95	...	8	Cir str.	Cum.	
6.	Calm.	0	be	...	29.797	83.3	82.8	98	84.0	8	Cir str.	Cm.&Str.	
8.	Calm.	0	be	...	29.840	82.5	82.0	97	...	8	Cir cum.	Cum.	
10.	sw $\frac{1}{2}$ w.	1	b	...	29.856	82.5	81.3	94	...	8	...	Cm.&Str.	
Midt.	sw $\frac{1}{2}$ w.	1	be	...	29.851	81.8	79.8	90	...	8	...	Cm.&Str.	
Totals.	...	8	...	...	9937	26.9	17.9	71	...	94	Cir str.	Cum. & Str.	
Mean.	Variable.	1	be	...	29.828	82.2	81.5	96	83.8	8			

## WEDNESDAY, 10TH.

2.	N.E.	1	be	...	29.819	81.8	80.3	93	...	7	Str.	Cum.	In Nares harbour. Temperature by self-registering thermometer, max. 85°, min. 78° 5.
4.	N.E.	1	bep	...	29.815	80.8	79.8	95	...	10	...	Cm.&Nb.	
6.	sw $\frac{1}{2}$ E.	1	bep	...	29.834	80.0	78.8	94	83.7	5	...	Cm.&Cum.	Rain to 6 A.M., none.
8.	Calm.	0	be	...	29.855	81.3	80.5	96	...	8	Cir cum.	Cum.	
10.	Calm.	0	be	...	29.854	82.8	81.3	92	...	8	Cir str.	Cum.	Sp. gr. 1.02592. 4 P.M., left Nares harbour for Yokohama, Japan.
Noon.	Calm.	0	be	...	29.827	84.8	82.5	89	...	7	Cir str.	Cum.	
2.	sw $\frac{1}{2}$ s.	1	be	...	29.797	83.8	82.3	93	...	8	Cir str.	Cum.	
4.	sw $\frac{1}{2}$ w.	2	bep	...	29.791	80.8	80.8	100	...	9	Str.	Cum.	
6.	sw $\frac{1}{2}$ w.	1	be	...	29.787	80.8	80.3	98	84.0	4	Cir str.	Cum.	
8.	sw $\frac{1}{2}$ w.	2	be	...	29.785	81.3	80.8	97	84.2	4	...	Cum.	
10.	sw $\frac{1}{2}$ s.	1	be	...	29.785	81.3	81.0	99	83.0	3	...	Cum.	
Midt.	sw $\frac{1}{2}$ E.	1	bep	...	29.805	81.0	80.8	99	83.0	7	...	Cm.&Nb.	
Totals.	...	11	...	...	9754	20.5	9.2	65	17.9	80	Cir str.	Cum. & Nimb.	
Mean.	Variable.	1	bep	...	29.813	81.7	80.8	95	83.6	7			

## THURSDAY, 11TH.

2.	sw $\frac{1}{2}$ w.	2	er	...	29.788	79.8	79.8	100	83.0	10	...	Cm.&Nb.	At noon, lat. 0° 42' S. long. 147° 0' E. Temperature by self-registering thermometer, max. 82.7°, min. 75° 0.
4.	Variable.	3	erlt	...	29.765	76.8	76.0	95	83.0	10	...	Cm.&Nb.	
6.	sw $\frac{1}{2}$ w.	1	erqu	...	29.801	77.8	77.8	100	83.0	10	...	Nimb.	Current, w. 22'. Rain to 6 A.M., 81 inch. Sp. gr. 1.02569.
8.	sw $\frac{1}{2}$ w.	5	eqp	...	29.879	77.5	77.0	97	83.0	10	...	Nimb.	
10.	sw $\frac{1}{2}$ w.	2	bep	...	29.845	78.8	78.3	97	83.2	9	...	Nimb.	Sp. gr. 1.02569.
Noon.	sw $\frac{1}{2}$ w.	2	be	3	29.793	80.3	79.0	94	83.7	9	Cir str.	Cum.	
2.	sw $\frac{1}{2}$ s.	3	e	...	29.747	81.8	80.8	95	83.7	10	...	Cm.&Str.	
4.	sw $\frac{1}{2}$ s.	2	cp	...	29.740	81.3	81.3	100	83.7	10	...	Cm.&Str.	
6.	sw $\frac{1}{2}$ s.	3	e	...	29.764	81.8	81.5	99	83.7	9	...	Cm.&Str.	
8.	sw $\frac{1}{2}$ s.	2	be	...	29.771	81.8	81.3	97	83.5	3	...	Cum.	
10.	sw $\frac{1}{2}$ s.	3	be	...	29.812	81.8	81.3	98	83.5	4	...	Cm.&Str.	
Midt.	sw $\frac{1}{2}$ s.	5	erq	...	29.806	81.8	81.8	100	83.5	10	...	Cm.&Nb.	
Totals.	...	33	...	...	9511	1.3	115.9	92	40.5	104	Cir str.	Cum., Str., & Nimb.	
Mean.	s.w.	3	bepqr	3	29.793	80.1	79.7	98	83.4	9			

## FRIDAY, 12TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SW $\frac{1}{2}$ N.	4	cyp	...	29.722	79.8	79.8	100	82.2	10	...	Cm.&Str.	At noon, lat. 0° 12' N. long. 147° 53' E. Temperature by self-registering thermometer, max. 86°, min. 77°. Current, w. 22'. Rain to 6 A.M., '13 inch.
4.	SW $\frac{1}{2}$ W.	3	bel	...	29.712	80.3	80.5	100	82.5	9	...	Cm.&Str.	
6.	SW $\frac{1}{2}$ W.	3	be	...	29.750	81.3	80.8	97	83.5	9	...	C.A.S.&Cm.	
8.	SW $\frac{1}{2}$ W.	3	be	...	29.770	81.3	77.8	83	83.5	7	...	Cm.&Cm.st	
10.	N $\frac{1}{2}$ W.	3	be	...	29.777	81.8	78.3	82	83.5	5	Cir str.	Cum.	
Noon.	N $\frac{1}{2}$ E.	4	be	...	29.755	83.8	78.8	76	83.7	5	...	Cm.&Str.	
2.	SW $\frac{1}{2}$ N.	4	be	...	29.751	84.8	78.8	72	84.0	5	...	Str.	
4.	SW $\frac{1}{2}$ N.	3	be	...	29.704	83.8	77.8	72	84.2	4	...	Cum.	
6.	SW $\frac{1}{2}$ W.	5	be	...	29.736	80.8	77.3	82	84.0	6	Cir str.	Cm.&Cm.st	
8.	SW $\frac{1}{2}$ W.	1	bel	...	29.755	81.8	77.8	80	83.7	3	...	Cum.	
10.	SW $\frac{1}{2}$ W.	2	bml	...	29.789	81.8	76.8	76	83.5	0	...	...	
Midt.	N $\frac{1}{2}$ E.	2	beml	...	29.773	81.8	77.8	80	83.5	4	...	Cum.	
Totals.	...	35	beqpl	...	8894	23.1	102.3	1000	41.8	67	...	Cum., Str., & Cum str.	
Mean.	N.N.W.	3		...	29.749	81.9	78.5	83	83.5	6	...	Cir str.	

## SATURDAY, 13TH.

2.	N $\frac{1}{2}$ E.	3	be	...	29.725	81.3	77.3	80	83.5	4	Str.	Cum.	At noon, lat. 0° 40' N. long. 148° 41' E. Temperature by self-registering thermometer, max. 84°, min. 79° 5'. Current, s. 82° w. 14'. Rain to 6 A.M., '03 inch.
4.	N $\frac{1}{2}$ E.	4	erl	...	29.740	81.3	77.8	82	83.5	10	Str.	Cum.	
6.	NW $\frac{1}{2}$ W.	3	e	...	29.761	80.8	77.5	84	83.5	10	Str.	Cum.	
8.	N $\frac{1}{2}$ E.	3	be	...	29.782	81.8	77.5	79	83.7	8	Cir str.	Cum.	
10.	SW $\frac{1}{2}$ W.	3	be	...	29.797	81.8	77.3	78	83.7	5	Cir.	Cum.	
Noon.	SW $\frac{1}{2}$ W.	3	be	...	29.768	83.0	75.8	67	83.7	5	Cir.	Cum.	
2.	N $\frac{1}{2}$ E.	3	be	...	29.727	82.8	77.3	74	84.0	8	Cir str.	Cum.	
4.	N $\frac{1}{2}$ E.	2	be	...	29.727	82.8	76.8	72	83.2	7	Cir str.	Cum.	
6.	N $\frac{1}{2}$ E.	3	be	...	29.771	82.8	77.8	76	83.5	7	...	Cum.	
8.	N $\frac{1}{2}$ E.	2	be	...	29.787	81.8	76.5	75	83.5	7	Cir str.	Cum.	
10.	N $\frac{1}{2}$ E.	3	be	...	29.795	81.8	76.8	76	83.7	5	Cir str.	Cum.	
Midt.	N $\frac{1}{2}$ E.	2	be	...	29.791	81.3	76.0	75	83.5	3	Cir.	Cum.	
Totals.	...	34	beqpl	...	9171	23.3	84.4	78	43.0	79	...	Cir str.	Cum.
Mean.	N.	3		...	29.764	81.9	77.0	76	83.6	7	...	Cir str.	

## SUNDAY, 14TH.

2.	N $\frac{1}{2}$ E.	2	be	...	29.732	81.3	75.8	74	83.5	1	...	Cum.	At noon, lat. 0° 52' N. long. 147° 55' E. Temperature by self-registering thermometer, max. 85°, min. 79° 7'. Current, s. 70° w. 37'. 6 A.M., rain, none.
4.	N $\frac{1}{2}$ E.	2	be	...	29.734	81.3	76.3	76	83.5	1	...	Cum.	
6.	NW $\frac{1}{2}$ N.	3	be	...	29.758	80.8	76.8	80	83.0	6	Cir.	Cum.	
8.	N $\frac{1}{2}$ E.	2	be	...	29.820	81.8	75.8	72	83.0	7	Cir.	Cum.	
10.	NNE $\frac{1}{2}$ E.	2	be	...	29.805	82.8	76.8	72	83.0	7	Cir str.	Cum.	
Noon.	NNE $\frac{1}{2}$ E.	2	be	...	29.799	83.8	77.5	71	83.5	6	Cir.	Cum.	
2.	N $\frac{1}{2}$ E.	2	be	...	29.758	83.8	77.8	72	83.5	6	Cir str.	Cum.	
4.	N $\frac{1}{2}$ E.	2	be	...	29.734	83.3	77.8	74	83.5	5	Cir cum.	Cum.	
6.	N $\frac{1}{2}$ E.	1	be	...	29.763	82.8	76.8	72	83.5	3	Cir str.	Cum.	
8.	NNE $\frac{1}{2}$ E.	2	be	...	29.767	82.0	76.0	72	83.5	3	...	Cum.	
10.	NE $\frac{1}{2}$ N.	3	be	...	29.803	81.5	75.5	72	83.0	4	...	Cum.	
Midt.	NE $\frac{1}{2}$ E.	2	be	...	29.774	81.3	76.0	75	83.0	3	Cir str.	Cum.	
Totals.	...	25	be	...	9237	26.5	78.9	42	39.5	52	...	Cir str.	Cum.
Mean.	N $\frac{1}{2}$ E.	2		...	29.770	82.2	76.6	73	83.3	4	...	Cir str.	

MONDAY, 15TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE $\frac{1}{2}$ E.	3	bc	...	29.758	80.8	75.3	74	83.0	3	Cir.	Cum.	At noon, lat. 1° 33' N. long. 147° 6' E. Temperature by self-registering thermometer, max. 84° 2', min. 79° 5'. Current, s. 72° w. 30'. Rain to 6 A.M., none. Black bulb 136°. Sp. gr. 1.02656.
4.	NE $\frac{1}{2}$ N.	3	bc	...	29.758	80.8	74.8	72	82.7	2	Cir.	Cum.	
6.	NE $\frac{1}{2}$ N.	3	bc	...	29.775	80.8	74.8	72	82.7	3	Cir str.	Cum.	
8.	NE $\frac{1}{2}$ N.	2	bc	...	29.808	82.3	75.3	68	82.7	2	Cir.	Cum.	
10.	NE $\frac{1}{2}$ E.	2	bc	...	29.803	82.3	75.3	70	83.0	4	Cir str.	Cum.	
Noon.	NE $\frac{1}{2}$ E.	2	bc	...	29.767	83.3	76.3	69	83.2	3	Cir str.	Cum.	
2.	NE $\frac{1}{2}$ E.	1	bc	...	29.751	83.5	76.8	69	83.5	4	Cir str.	Cum.	
4.	NE $\frac{1}{2}$ E.	2	bc	...	29.742	82.8	76.0	69	...	5	Cir str.	Cum.	
6.	NE $\frac{1}{2}$ N.	1	bc	...	29.784	82.8	76.8	72	83.2	7	Cir str.	Cum.	
8.	NE $\frac{1}{2}$ N.	3	bc	...	29.819	81.8	76.8	76	83.5	5	Cir cum.	Cum.	
10.	NE $\frac{1}{2}$ N.	2	bc	...	29.829	81.8	75.8	72	83.0	6	Cir cum.	Cum.	Totals.
Midt.	NE $\frac{1}{2}$ N.	3	bc	...	29.822	81.8	75.8	72	83.0	7	Cir cum.	Cum.	
Totals.	...	27	bc	...	9396	24.8	70.5	15	33.5	51	Cir cum. & Cir str.	Cum.	Mean.
Mean.	N.E.	2	...	...	29.783	82.1	75.9	71	83.0	4			

TUESDAY, 16TH.

2.	NE $\frac{1}{2}$ E.	1	bc	...	29.777	81.3	75.8	74	83.0	4	Str.	Cum.	At noon, lat. 2° 20' N. long. 146° 16' E. Temperature by self-registering thermometer, max. 84°, min. 79°. Current, s. 84° w. 28'. Rain to 6 A.M., none. Black bulb 135°. Sp. gr. 1.02652.
4.	NE $\frac{1}{2}$ E.	3	bc	...	29.768	81.0	75.5	74	82.7	4	Cir str.	Cum.	
6.	NE $\frac{1}{2}$ E.	2	bc	...	29.797	80.8	74.8	72	83.0	4	Str.	Cum.	
8.	E $\frac{1}{2}$ N.	2	bc	...	29.840	81.8	75.8	72	82.7	5	Cir.	Cum str.	
10.	E $\frac{1}{2}$ N.	2	bc	...	29.857	83.3	76.8	70	83.0	8	Cir.	Cum.	
Noon.	E $\frac{1}{2}$ N.	1	bc	...	29.827	82.8	76.8	72	83.0	5	Cir cum.	Cum.	
2.	E $\frac{1}{2}$ N.	1	bc	...	29.764	82.5	76.5	72	83.5	6	Cir cum.	Cum.	
4.	E $\frac{1}{2}$ N.	3	bc	...	29.758	82.3	76.3	72	83.5	8	Cir cum.	Cum.	
6.	NE $\frac{1}{2}$ E.	2	c	...	29.802	81.8	76.8	70	83.0	9	Str.	Cum.	
8.	NE $\frac{1}{2}$ E.	2	bc	...	29.821	81.8	76.3	74	83.0	7	...	Cum.	
10.	NE $\frac{1}{2}$ E.	2	bc	...	29.867	81.8	76.8	76	82.7	4	...	Cum.	Totals.
Midt.	NE $\frac{1}{2}$ E.	1	bc	...	29.839	81.8	77.3	78	83.0	6	...	Cum.	
Totals.	...	22	bc	...	9717	23.0	75.5	42	36.1	70	Cir cum. & Str.	Cum.	Mean.
Mean.	E.N.E.	2	...	...	29.810	81.9	76.3	73	83.0	6			

WEDNESDAY, 17TH.

2.	NE $\frac{1}{2}$ E.	1	bc	...	29.812	81.5	76.3	75	83.0	6	...	Cum.	At noon, lat. 3° 23' N. long. 145° 35' E. Temperature by self-registering thermometer, max. 84°, min. 80°. Current, s. 55° w. 35'. Rain to 6 A.M., none. Saw a boatswain bird. Sp. gr. 1.02620.
4.	NE $\frac{1}{2}$ E.	2	bc	...	29.802	81.8	76.8	76	83.0	2	...	Cum.	
6.	NE $\frac{1}{2}$ E.	1	bc	...	29.831	80.8	76.8	80	83.0	4	Str.	Cum.	
8.	NE $\frac{1}{2}$ E.	1	bc	...	29.870	81.8	77.0	77	83.0	7	Cir str.	Cum.	
10.	E $\frac{1}{2}$ N.	2	bc	...	29.875	82.8	77.8	76	83.2	7	Cir.	Cum.	
Noon.	E $\frac{1}{2}$ N.	2	bc	...	29.883	82.8	78.3	78	83.7	6	Cir.	Cum.	
2.	E $\frac{1}{2}$ N.	2	bc	...	29.817	83.3	77.8	74	83.7	5	Cir.	Cum.	
4.	E $\frac{1}{2}$ N.	2	bc	...	29.777	82.8	77.3	74	84.0	7	Cir.	Cum.	
6.	E $\frac{1}{2}$ N.	1	bc	...	29.813	82.8	77.8	76	83.7	4	Cir str.	Cum.	
8.	E.	2	bc	...	29.850	82.8	77.8	76	83.0	4	Cir str.	Cum.	Totals.
10.	E.	2	bc	...	29.864	82.8	78.3	78	83.2	4	Cir str.	Cum.	
Midt.	E $\frac{1}{2}$ N.	1	bc	...	29.864	82.3	78.3	80	83.2	6	...	Cm. & Nb.	Mean.
Totals.	...	19	bc	...	10058	28.3	90.3	80	3.7	62	Cir str.	Cum.	
Mean.	E.N.E.	2	...	...	29.838	82.4	77.5	77	83.3	5			

## THURSDAY, 18TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sky.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity.	Temperature of Air.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
2.	E.S.	42	bd	...	29.828	80.8	75.8	76	83.0	5	...	Cm.&Nb.	...	At noon, lat. 4° 21' S. long. 145° 18' E. Temperature by self-registering thermometer, max. 86°, min. 75°. Current, S. 49° W. 23°. Rain to 6 A.M., 1.09 inches. Black bulb 135°. Sp. gr. 1.02666.
4.	S.E.	1	bd	...	29.818	80.3	77.8	88	82.5	5	...	Cm.&Nb.	...	
6.	Variable.	3	otq	...	29.866	77.3	74.8	87	82.5	10	...	Cum.	...	
8.	Variable.	1	bc	...	29.903	79.8	75.8	80	82.7	9	Cir cum.	Cum.	...	
10.	N.E.	1	bc	...	29.908	81.8	76.8	76	83.0	7	Cir str.	Cum.	...	
Noon	N.E.	1	bc	...	29.875	83.8	78.8	76	83.5	7	Cir str.	Cum.	...	
2.	N.E.	1	bc	...	29.835	84.3	78.8	74	83.7	7	Cir.	Cum.	...	
4.	Calm.	0	bc	...	29.817	84.3	78.8	74	83.7	8	Cum.	Nimb.	...	
6.	E.N.E.	1	bc	...	29.845	82.8	78.3	78	83.5	7	Str.	Cum.	...	
8.	E.N.E.	2	bc	...	29.856	82.0	78.0	80	84.0	7	...	Cum.	...	
10.	E.S.	0	bcp	...	29.894	80.8	76.8	80	83.0	9	...	Cm.&Nb.	...	
Midd.	S.N.E.	3	bc	...	29.879	81.0	77.0	80	83.0	7	Cir str.	Cum.	...	
Totals.	...	16	bcp	...	16324	19.0	87.5	169	38.1	88	...	Cir str.	Cum. & Nimb.	
Mean.	E.N.E.	1		...	29.860	81.6	77.3	79	83.2	7	...			

## FRIDAY, 19TH.

2.	N.E.	2	bcp	...	29.838	79.8	76.8	85	83.0	7	...	Cm.&Nb.	...	At noon, lat. 5° 31' S. long. 145° 13' E. Temperature by self-registering thermometer, max. 84° 5, min. 78° 0. Current, S. 21° E. 8'. Rain to 6 A.M., 0.11 inch. Sp. gr. 1.02615.
4.	N.E.	3	bcp	...	29.838	80.8	77.8	85	82.7	5	...	Cm.&Nb.	...	
6.	E.N.E.	2	bc	...	29.893	80.3	76.8	83	82.0	4	Cir str.	Cum.	...	
8.	N.E.	1	bc	...	29.895	81.8	75.8	79	82.5	4	Cir cum.	Cum.	...	
10.	N.E.	2	bc	...	29.898	82.5	77.8	77	82.2	7	Cir str.	Cum.	...	
Noon	N.E.	1	bc	...	29.882	83.5	77.8	78	82.7	7	Cir str.	Cum.	...	
2.	N.E.	2	bcp	...	29.856	78.0	77.8	99	82.7	7	Cir str.	Cum.	...	
4.	N.E.	3	bc	...	29.832	82.3	77.5	77	82.8	7	Cir str.	Cm.&Nb.	...	
6.	N.E.	2	bc	...	29.868	81.8	77.0	77	82.2	6	Cir str.	Cum.	...	
8.	N.E.	3	bc	...	29.880	80.8	76.3	78	82.5	5	Cir.	Cum.	...	
10.	E.N.E.	2	bc	...	29.898	80.8	76.5	79	82.2	9	Cir cum.	Cum.	...	
Midd.	E.N.E.	2	bc	...	29.858	80.5	76.0	78	82.2	6	...	Cum.	...	
Totals.	...	25	bcp	...	10436	12.0	85.6	10	29.7	74	...	Cir str.	Cum. & Nimb.	
Mean.	N.E.	2		...	29.870	81.1	77.1	81	82.5	6	...			

## SATURDAY, 20TH.

2.	N.E.	2	bc	...	29.830	80.5	76.5	80	81.7	8	...	Cm.&Str.	...	At noon, lat. 6° 33' S. long. 145° 5' E. Temperature by self-registering thermometer, max. 81° 7, min. 77° 5. Current, S. 27° W. 7. Rain to 6 A.M., none. Sp. gr. 1.02582.
4.	N.E.	2	bc	...	29.820	80.5	76.5	80	81.7	9	...	Cm.&Str.	...	
6.	N.E.	2	bc	...	29.869	79.3	74.8	78	81.5	6	Cir str.	Cm.&Cust	...	
8.	N.E.	3	bcp	...	29.905	79.3	76.3	85	81.5	8	...	Cm.&Nb.	...	
10.	N.E.	1	bcp	...	29.905	79.8	76.8	85	81.0	10	...	Cm.&Nb.	...	
Noon	N.E.	3	bc	...	29.885	80.3	77.3	85	81.2	5	...	Cm.&Str.	...	
2.	N.E.	3	bcp	...	29.835	80.8	77.3	82	81.2	8	...	Cm.&Nb.	...	
4.	N.E.	3	bcp	...	29.819	80.8	76.5	79	81.2	9	...	Cm.&Nb.	...	
6.	N.E.	3	bcp	...	29.853	80.8	75.8	76	81.5	7	Cir str.	Cm.&Cust	...	
8.	N.E.	3	bc	...	29.861	80.8	75.8	76	81.5	9	...	Cm.&Nb.	...	
10.	N.E.	3	bc	...	29.886	80.3	75.3	75	81.2	4	Cir str.	Cum.	...	
Midd.	N.E.	4	bc	...	29.886	79.8	74.8	75	81.0	3	Cir str.	Cum.	...	
Totals.	...	32	bcp	...	16354	3.0	73.7	116	16.2	86	...	Cir str.	Cum. & Nimb.	
Mean.	N.E.	3		...	29.863	80.2	76.1	80	81.4	7	...			

## SUNDAY, 21st MARCH 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.½E.	4	bc	...	29.855	79.5	74.0	73	81.0	8	...	Cum.	At noon, lat. 7° 45' N. long. 144° 26' E. Temperature by self-registering thermometer, max. 85°, min. 78°. Current, w. 10'. Rain to 6 A.M., .05 inch. Sp. gr. 1.02601.
4.	N.E.½E.	3	bc	...	29.857	79.5	74.0	73	81.0	5	...	Cum.	
6.	N.E.½E.	4	bc	...	29.891	79.3	73.8	73	81.0	4	Cir str.	Cum.	
8.	N.E.½E.	3	bc	...	29.905	80.3	74.0	70	81.0	3	Cir str.	Cum.	
10.	N.E.½E.	4	bc	...	29.921	81.3	74.8	70	81.0	5	Cir str.	Cum.	
Noon.	N.E.½E.	3	bc	...	29.896	82.3	75.8	70	81.2	4	Cir.	Cum.&Str.	
2.	N.E.½E.	3	bc	...	29.778	83.3	76.8	70	81.5	4	Cir.	Cum.	
4.	E.N.½N.	3	bc	...	29.810	81.8	76.3	74	81.2	4	Cir str.	Cum.	
6.	N.E.½E.	3	bc	...	29.847	80.8	75.8	76	81.2	4	Cir str.	Cum.	
8.	E.½N.	3	bcp	...	29.870	80.8	74.8	72	81.0	3	Str.	Cum.	
10.	E.N.½N.	2	bc	...	29.885	79.8	75.8	80	81.0	6	...	Cum.&Nb.	
Midt.	E.N.½N.	4	bcp	...	29.883	78.8	74.8	80	81.0	9	...	Cum.&Nb.	
Totals.	...	39	bcp	...	10398	7.5	60.7	41	11	59	Cir str.	Cum. & Nimb.	
Mean.	N.E.½E.	3		...	29.866	80.6	75.1	73	81.1	5			

## MONDAY, 22d.

2.	N.E.½E.	6	bcp	...	29.833	79.8	74.3	73	81.0	4	...	Cum.	At noon, lat. 9° 48' N. long. 143° 52' E. Temperature by self-registering thermometer, max. 81½°, min. 75½°. Current, s. 81°, w. 6'. 6 A.M., rain gauge capsized. Black bulb 130°. Sp. gr. 1.02599.
4.	E.N.½N.	5	bcp	...	29.831	79.8	74.8	75	81.0	7	...	Cum.	
6.	N.E.½E.	4	bcp	...	29.864	79.8	74.3	73	81.2	5	...	Cum.	
8.	N.E.½E.	5	bc	...	29.902	80.5	74.8	72	80.7	5	...	Cum.	
10.	N.E.½E.	4	bc	...	29.901	80.8	73.8	68	80.7	3	...	Cum.	
Noon.	N.E.½E.	5	bc	...	29.866	80.5	74.5	71	80.7	4	...	Cum.	
2.	E.N.½N.	5	bc	...	29.842	80.8	74.3	70	80.7	4	Cir.	Cum.	
4.	E.N.½N.	5	bc	...	29.824	79.8	74.5	71	81.0	5	Cir str.	Cum.&Str.	
6.	E.½N.	5	bc	...	29.849	80.3	73.8	69	80.0	1	...	Cum.	
8.	E.N.½N.	4	bc	...	29.846	79.8	73.5	70	80.0	2	...	Cum.	
10.	E.N.½N.	3	bc	...	29.863	79.8	73.3	69	80.0	0	...	Cum.	
Midt.	E.N.½N.	3	b	...	29.891	79.8	73.8	71	80.0	6	...	Cum.	
Totals.	...	54	bcp	...	10312	1.5	49.7	852	7.0	46	Cir str.	Cum.	
Mean.	E.N.E.	4		...	29.859	80.1	74.1	71	80.6	4			

## TUESDAY, 23d.

2.	N.E.½E.	4	bc	...	29.845	78.8	74.8	80	80.0	5	...	Cum.	At noon, lat. 11° 24' N. long. 143° 16' E. Temperature by self-registering thermometer, max. 82°, min. 77° 2. Current, N. 78°, w. 19'. Rain to 6 A.M., none. Sp. gr. 1.02585.
4.	N.E.½E.	5	bc	...	29.843	78.8	74.3	78	80.0	4	...	Cum.&Str.	
6.	E.N.½N.	3	bc	...	29.892	78.3	75.3	84	80.0	3	...	Cum.	
8.	E.N.½N.	3	bcp	...	29.929	79.8	75.5	79	80.0	8	...	Cum.&Nb.	
10.	E.N.½N.	3	bcp	...	29.925	80.3	76.0	79	80.2	5	Cir str.	Cum.	
Noon.	E.½N.	5	bcp	3	29.852	78.5	76.0	87	80.2	9	Cir str.	Cum.&Nb.	
2.	E.N.½N.	3	bcp	...	29.852	78.8	75.5	84	80.2	7	...	Cum.&Str.	
4.	E.½N.	4	bc	...	29.830	80.8	76.3	78	80.5	6	...	Cum.	
6.	E.N.½N.	3	bcp	...	29.863	79.3	76.0	84	80.2	9	Str.	Cum str.	
8.	E.N.½N.	5	bcp	...	29.893	78.8	75.8	85	80.0	7	...	Cum.&Nb.	
10.	E.N.½N.	5	bc	...	29.928	79.5	76.0	83	80.0	8	...	Cum.&Cmst	
Midt.	E.N.½N.	4	bc	...	29.932	79.3	75.5	81	80.0	9	...	Cum.&Cmst	
Totals.	...	47	bcp	...	10604	111.0	67.0	22	13	80	Cir str.	Cum., Cum str., & Nimb.	
Mean.	E.N.½N.	4		3	29.884	79.2	75.6	82	80.1	7			

## WEDNESDAY, 24TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer reduced to Sea Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E by S.	4	bc	...	29.889	79.3	75.0	79	80.0	5	...	Cum.	At noon, lat. 13° 10' N. long. 142° 45' E. Temperature by self-registering thermo- meter, max. 89° 7', min. 75° 0'. Current, s. 68° w. 11'. Rain to 6 A.M., .16 inch. Sp. gr. 1.02584.
4.	N E by E.	5	bc	...	29.885	78.8	74.3	78	80.0	12	...	Cum.	
6.	N E by E.	4	bc	...	29.912	78.3	73.8	77	79.7	12	...	Cum.	
8.	N E by E.	5	bc	...	29.926	80.3	73.8	69	79.7	12	Cir.	Str.	
10.	E by S.	4	b	...	29.935	80.3	73.8	69	80.0	0	...	...	
Noon.	E by S.	4	bc	...	29.935	80.3	74.3	71	80.0	12	Cir.	Cum.	
2.	E by S.	4	bc	...	29.865	80.0	73.8	70	80.0	4	...	Cum.	
4.	E by S.	4	bc	...	29.863	79.8	74.0	72	80.0	4	...	Cum.	
6.	E by S.	4	bc	...	29.866	79.8	74.3	73	80.0	3	...	Cm. & Cum. str.	
8.	E by S.	4	bc	...	29.903	78.8	73.8	75	79.5	3	Cir str.	Cum. & Str.	
10.	E by S.	4	bc	...	29.945	78.8	74.3	77	79.5	3	...	Cum.	Totals.
Midt.	E by S.	5	bc	...	29.934	78.8	73.3	73	79.2	4	...	Cum.	
Totals.	...	51	bc	...	10888	113.3	48.5	43	117.6	34	Cir str.	Cum. & Str.	Mean.
Mean.	E by S.	4		...	29.907	79.4	74.0	74	79.8	3			

## THURSDAY, 25TH.

2.	N E by E.	4	bc	3	29.914	78.8	74.3	78	79.2	4	...	Cum.	At noon, lat. 14° 44' N. long. 142° 13' E. Temperature by self-registering thermo- meter, max. 83° 5', min. 76° 2'. Current, s. 77° w. 13'. Rain to 6 A.M., none. Sp. gr. 1.02612.
4.	N. E.	3	bc	3	29.921	77.8	72.8	75	79.2	3	...	Cum.	
6.	N E by E.	3	bc	...	29.935	77.3	71.3	71	79.0	2	Str.	Cum.	
8.	E. N. E.	3	bc	...	29.958	78.8	71.8	67	79.0	4	Str.	Cum.	
10.	E. N. E.	4	bc	...	29.956	81.0	70.8	56	79.0	4	Cir str.	Cum.&Str.	
Noon.	E. N. E.	3	bc	...	29.933	79.3	71.5	64	79.0	3	Cir.	Cum.&Str.	
2.	E. N. E.	4	bc	...	29.875	81.8	72.3	59	79.0	7	Cir str.	Cum.	
4.	N E by E.	3	bc	...	29.866	79.3	71.8	65	79.5	4	Cir.	Cum.	
6.	N E by E.	4	bc	...	29.904	78.8	72.3	69	79.0	4	Cir str.	Cum.	
8.	N E by E.	3	bc	...	29.932	78.3	71.8	69	79.0	4	...	Cum.	
10.	N E by E.	4	bc	...	29.919	78.3	72.3	71	79.0	6	Cir str.	Cum.	
Midt.	N E by E.	3	bc	...	29.915	77.8	71.8	71	79.0	5	Cir.	Cum.	
Totals.	...	41	bc	...	11028	107.3	24.8	81.5	9	50	Cir str.	Cum & Str.	
Mean.	N E by E.	3		3	29.919	78.9	72.1	68	79.1	4			

## FRIDAY, 26TH.

2.	N E by E.	2	bc	...	29.896	77.8	71.8	71	79.0	2	...	Cum.	At noon, lat. 16° 21' N. long. 141° 44' E. Temperature by self-registering thermo- meter, max. 80°, min. 74°. Current, S. 71° W. 12'. Rain to 6 A.M., none.
4.	E. N. E.	4	bc	...	29.910	77.3	71.3	71	79.0	5	Cir str.	Cum.	
6.	E. N. E.	3	bc	...	29.944	77.0	71.8	74	79.0	6	Cir str.	Cum.	
8.	E. N. E.	3	bc	...	29.967	78.8	73.3	73	79.2	5	Cir str.	...	
10.	N E by E.	3	bcp	...	29.967	78.3	73.8	77	79.2	4	Cir str.	...	
Noon.	N E by E.	3	bc	...	29.932	79.3	74.0	74	79.2	3	Cir.	Cum.	
2.	N E by E.	3	bc	...	29.912	79.3	74.8	78	79.7	4	Cir.	Cum.	
4.	N E by E.	3	bc	...	29.896	79.0	73.8	74	79.7	5	Cir.	Cum.	
6.	E. N. E.	4	bcp	...	29.943	76.3	73.8	87	79.2	9	Cir str.	Cum. & Str.	
8.	E by S.	2	bcp	...	29.973	77.8	73.8	79	79.2	8	...	Cum. & N.b.	
10.	N. E.	4	bcp	...	29.971	78.8	71.8	89	79.0	6	...	Cum. & N.b.	
Midt.	E by S.	2	bc	...	29.948	76.8	72.8	79	79.0	10	Cir cum.	Cum. & N.b.	
Totals.	...	37	bcp	...	11259	94.5	36.8	86	24	67	Cir str.	Cum., Str., & Nimb.	
Mean.	N E by E.	3		...	29.938	77.6	73.1	77	79.2	6			

## SATURDAY, 27TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sky, 9 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>b</sup> N.	3	bc	...	29.919	77.0	72.8	78	79.0	9	...	Cm.&Nb.	At noon, lat. 17° 35' N. long. 141° 21' E. Temperature by self-registering thermo- meter, max. 81° 7', min. 72° 7'. Current, N. 48° W. 23'. Rain to 6 A.M., .17 inch.  Sp. gr. 1.02556.
4.	E.	2	b	...	29.909	76.8	72.8	79	79.0	3	Cir.	Cir cum.	
6.	E.	1	bc	...	29.950	76.8	72.3	77	79.0	3	Str.	Cum.	
8.	E.	2	bc	...	29.969	78.8	74.3	78	79.0	5	Cir str.	Cum.	
10.	E <sup>b</sup> S.	2	bc	...	29.972	80.5	74.3	70	79.0	6	Cir str.	Cum.	
Noon.	E <sup>b</sup> S.	2	bc	...	29.960	79.5	73.8	72	79.2	5	Cir str.	Cum.	
2.	E.	2	bc	...	29.906	79.8	73.8	71	79.7	4	Cir str.	Cum.	
4.	E.	1	bc	...	29.898	79.5	73.5	71	79.7	4	Cir str.	Cum.	
6.	E <sup>b</sup> S.	1	bc	...	29.928	78.8	73.5	74	79.7	3	...	Cum.	
8.	E <sup>b</sup> N.	2	bc	...	29.947	78.3	73.3	75	79.0	5	...	Cum.	
10.	E.N.E.	1	bc	...	29.964	78.3	73.8	77	79.0	1	...	Cum.	
Midt.	E.	2	bc	...	29.971	78.3	73.5	76	79.0	4	...	Cum.	
Totals.	...	21	bc	...	11293	102.4	41.7	58	25	52	Cir str.	Cum.	
Mean.	E.	2		...	29.941	78.5	73.5	75	79.2	4			

## SUNDAY, 28TH.

2.	E <sup>b</sup> S.	1	bc	...	29.942	77.8	72.8	75	79.0	2	...	Cum.	At noon, lat. 18° 24' S. long. 141° 11' E. Temperature by self-registering thermo- meter, max. 81° 8', min. 76° 0. Current, N. 32° W. 26'. Rain to 6 A.M., none.  Sp. gr. 1.02596.
4.	E.	0	bc	...	29.911	77.3	72.3	75	78.8	0	...	Cum.	
6.	E <sup>b</sup> S.	1	bc	...	29.947	76.8	72.8	79	78.8	2	...	Cum.	
8.	E <sup>b</sup> S.	0	bc	...	29.968	78.3	73.3	75	79.0	5	Cir.	Cum.&Nb.	
10.	E <sup>b</sup> S.	1	bcp	...	29.986	78.8	74.3	77	79.5	6	Cir.	Cum.	
Noon.	E.	0	bc	...	29.966	79.3	73.8	73	79.5	1	...	Cum.	
2.	E.	1	bc	...	29.918	80.8	75.3	74	80.7	4	...	Cum.	
4.	E.	1	bc	...	29.911	80.5	74.8	72	80.0	4	...	Cum.	
6.	E.	1	bc	...	29.946	79.3	74.0	74	80.5	4	...	Cum.	
8.	E <sup>b</sup> S.	2	bc	...	29.955	78.8	73.8	75	79.7	3	Cir.	Cum.	
10.	E <sup>b</sup> S.	2	bc	...	29.988	78.3	73.8	77	79.7	2	...	Cum.	
Midt.	E <sup>b</sup> S.	2	bc	...	29.978	78.3	73.3	75	79.0	1	...	Cum.	
Totals.	...	12	bcp	...	11416	104.3	44.3	61	114.2	34	Cir.	Cum.	
Mean.	E <sup>b</sup> S.	1		...	29.951	78.7	73.7	75	79.5	3			

## MONDAY, 29TH.

2.	E <sup>b</sup> S.	2	bc	1	29.965	76.0	73.5	77	79.0	3	...	Cum.	At noon, lat. 19° 25' S. long. 141° 13' E. Temperature by self-registering thermo- meter, max. 82° 7', min. 76° 7'. Current, N. 17° W. 17'. Rain to 6 A.M., .08 inch. Sp. gr. 1.02598. Black bulb 138'. Several sharks, pilot fish, one booby, and two large tern seen during the day.
4.	S.E.	1	bc	...	29.958	77.8	74.3	81	79.0	3	...	Cum.	
6.	E.S.E.	1	bc	...	29.979	77.8	73.8	79	79.2	4	...	Cum.	
8.	E <sup>b</sup> S.	1	bc	...	29.995	79.8	74.8	75	79.5	4	...	Cum.	
10.	S.E.	2	bc	...	30.009	80.8	75.3	74	80.0	3	Cir.	Cum.	
Noon.	S.E.	2	bc	...	29.992	81.3	75.5	73	80.0	4	Cir.	Cum.	
2.	S.E.	2	bc	...	29.947	81.8	75.8	72	80.7	3	Cir str.	Cum.	
4.	S.S.E.	1	bc	...	29.932	81.8	75.8	72	80.0	3	Cir str.	Cum.	
6.	S.E.	2	bc	...	29.962	79.8	75.8	80	79.7	3	...	Cm.&Cm st	
8.	E.	1	bcp	...	29.980	76.8	73.8	84	79.7	9	...	Cm.&Nb.	
10.	E.	2	bc	...	29.999	77.8	74.3	81	79.5	4	...	Cum.	
Midt.	E <sup>b</sup> N.	1	bc	...	29.995	77.8	74.0	80	79.2	4	Cir.	Cum.	
Totals.	...	18	bcp	...	11713	111.3	56.7	88	115.5	47	Cir str.	Cum.	
Mean.	E.S.E.	2		1	29.976	79.3	74.7	77	79.6	4			

## TUESDAY, 30TH MARCH 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	E.N.E.	12	b	...	29.958	77.3	73.8	82	79.0	0	...	...	At noon, lat. 29° 15' S. long. 140° 59' E. Temperature by self-registering thermo- meter, max. 79° 7', min. 75° 7'. Current, S. 58° W. 6'. Rain to 6 A.M., '97 inch. Black bulb 134°. Sp. gr. 1.02618. Sunset, brilliant zodiacal light.
4.	E.N.E.	12	bc	...	29.977	77.3	73.8	82	78.2	1	...	...	
6.	E.N.E.	1	bc	...	29.990	77.0	73.5	81	78.0	1	...	...	
8.	E.N.E.	1	bc	...	30.023	78.3	74.3	79	78.0	1	...	...	
10.	E.N.E.	1	bc	...	30.018	78.3	73.8	77	78.0	1	...	...	
Noon.	E.	1	bc	...	29.986	79.0	74.3	76	79.0	1	...	...	
2.	E.N.E.	12	bc	...	29.952	78.8	73.8	75	79.2	2	...	...	
4.	E.N.E.	12	bc	...	29.938	78.8	73.8	75	79.2	3	Cir.	Cum.	
6.	E.	12	bc	...	29.961	78.8	74.8	80	79.2	2	Str.	Cum.	
8.	E.N.E.	12	bc	...	29.958	78.3	74.8	82	79.0	3	...	Cum.	
10.	E.N.E.	3	bc	...	29.986	77.8	73.8	79	78.2	1	...	Cum.	
Midt.	S.W.	1	bc	...	29.964	77.5	71.3	83	78.2	1	...	Cum.	
Totals.	...	20	bc	...	11741	97.2	48.8	111	103.2	17	Cir str.	Cum.	
Mean.	E.N.E.	12		...	29.978	78.1	74.1	79	78.6	1			

## WEDNESDAY, 31st.

2.	E.	1	bc	...	29.950	77.5	73.8	80	78.0	3	Str.	Cum.	At noon, lat. 21° 19' S. long. 140° 40' E. Temperature by self-registering thermo- meter, max. 82°, min. 76°. Current, S. 39° W. 16'. Rain to 6 A.M., none. Black bulb 136°. Sp. gr. 1.02630.
4.	E.S.E.	1	bc	...	29.939	76.8	72.8	79	78.0	4	Cir.	Cum. & Nib.	
6.	S.	1	bc	...	29.972	76.8	74.0	85	78.0	5	Cir str.	Cum.	
8.	S.W.	1	bc	...	29.993	77.8	74.5	83	78.0	7	Cir str.	Cum.	
10.	S.W.	12	bc	...	29.955	77.8	74.3	82	78.0	4	Str.	Cum.	
Noon.	S.	1	bc	...	29.953	80.8	76.8	80	79.0	6	Cir str.	Cum.	
2.	S.E.	1	bc	...	29.916	81.3	76.3	76	81.0	5	Cir.	Cum.	
4.	S.E.	1	bc	...	29.897	80.8	75.8	76	80.7	4	Cir.	Cum.	
6.	S.E.	1	bc	...	29.919	80.3	75.8	78	80.0	4	Cir str.	Cum.	
8.	E.S.E.	12	bep	...	29.943	77.3	74.8	87	79.0	7	...	Cum. & Nib.	
10.	S.S.E.	1	bc	...	29.946	77.8	75.3	87	78.7	4	...	Cum. & Str.	
Midt.	S.S.E.	1	bc	...	29.937	77.8	75.0	85	78.0	1	...	Cum.	
Totals.	...	14	bep	...	11350	102.8	59.2	18	106.4	54	Cir str.	Cum. & Nimb.	
Mean.	S.S.E.	1		...	29.946	78.6	74.9	81	78.9	4			

## THURSDAY, 1st APRIL.

2.	S.W.	1	bc	...	29.968	76.8	74.8	89	78.0	1	...	Cum.	At noon, lat. 22° 1' S. long. 140° 27' E. Temperature by self-registering thermo- meter, max. 82°, min. 75° 7'. Current, S. 45° W. 4'. Rain to 6 A.M., none. Two albatross and several sharks seen. Sp. gr. 1.02629.
4.	S.W.	12	bc	...	29.886	76.8	74.8	89	77.7	3	...	Cum.	
6.	S.W.	3	bc	...	29.929	77.8	75.8	89	77.7	1	...	Cum. & Nimb.	
8.	S.W.	4	bc	...	29.931	77.8	74.8	84	77.7	4	Cir cum.	Cum.	
10.	S.W.	3	bep	...	29.961	78.3	74.8	82	78.0	4	...	Cum.	
Noon.	S.W.	3	bc	...	29.938	79.8	76.3	82	78.5	3	Cir.	Cum.	
2.	S.W.	3	bc	1	29.924	79.8	76.0	81	78.7	7	Cir str.	Cum.	
4.	S.W.	12	c	...	29.916	79.3	75.8	83	78.7	9	Str.	Cum.	
6.	S.W.	3	bep	...	29.957	77.3	73.8	82	78.7	7	Cir str.	Cum. & Str.	
8.	S.W.	12	bep	...	29.971	74.8	72.8	89	79.7	6	...	Cum. & Nib.	
10.	S.S.E.	3	bc	...	29.997	75.8	73.3	87	78.5	7	...	Cum. & Nib.	
Midt.	S.W.	3	eqp	...	29.999	73.8	72.3	92	78.0	10	...	Nimb.	
Totals.	...	32	bep	...	11320	88.1	55.3	69	99.9	62	Cir str.	Cum. & Nimb.	
Mean.	Variable.	3		...	29.943	77.3	74.6	86	78.3	5			

## FRIDAY, 2D APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	3	ocd	2	29.957	73.8	71.8	89	77.5	10	...	Cm.&Str.	At noon, lat. 22° 49' N. long. 139° 21' E. Temperature by self-registering thermo- meter, max. 75° 5, min. 71° 0. Current, s. 73° w. 27'. Rain to 6 A.M., .05 inch.
4.	N.E.	3	ocd	...	29.991	73.8	71.8	89	77.5	10	...	Cm.&Str.	
6.	N.E.	3	od	...	30.050	73.3	71.8	91	76.7	10	...	Nimb.	
8.	N.E.	3	ocpd	...	30.049	73.3	71.8	91	77.0	9	...	Cm.&N.b.	
10.	N.E.	3	bc	...	30.061	74.8	71.8	84	77.5	8	...	Cum.	
Noon.	N.E.	3	bcp	...	30.063	74.8	71.8	84	77.0	10	...	Cm.&N.b.	
2.	N.E.	3	oe	...	30.064	74.3	71.8	87	77.5	10	...	Cm.&Str.	
4.	N.E.	5	ocpdm	...	30.051	73.3	71.3	89	77.0	10	...	Cm.&Str.	
6.	N.E.	6	oql	...	30.081	71.8	71.0	95	77.0	10	...	Nimb.	
8.	N.E.	5	oe	...	30.110	71.8	69.3	87	73.2	10	...	Cm.&Str.	
10.	N.E.	4	ocpd	...	30.129	70.8	68.8	88	72.0	10	...	Str.&N.b.	Sp. gr. 1.02607.
Midt.	E.N.E.	5	bcp	...	30.125	70.8	68.8	88	71.7	10	...	Cm.&N.b.	
Totals.	...	46	...	...	731	36.6	11.8	102	71.6	117	...	Cum., Str., & Nimb.	
Mean.	N.E.½E.	4	ocpdl	2	30.061	73.0	71.0	89	76.0	10	...	...	

## SATURDAY, 3D.

2.	E.N.E.	4	oe	...	30.127	71.3	68.8	85	72.5	9	...	Cm.&Str.	At noon, lat. 24° 49' N. long. 138° 34' E. Temperature by self-registering thermo- meter, max. 74°, min. 69° 2. Current, s. 63° w. 9'. Rain to 6 A.M., .07 inch.
4.	E.N.E.	3	oe	...	30.133	71.3	68.8	85	72.5	9	...	Cm.&Str.	
6.	N.E.	2	oe	...	30.158	71.8	69.8	89	73.0	10	...	...	
8.	N.E.	2	bc	...	30.185	71.3	69.8	91	70.0	7	Cir cum.	Cum.	
10.	E.N.	2	bc	...	30.186	71.8	70.0	90	70.7	5	Cir str.	Cm.&Str.	
Noon.	E.N.	1	bc	...	30.164	72.3	70.8	92	71.5	5	...	...	
2.	E.N.E.	1	bc	...	30.157	73.8	71.3	87	72.2	4	Cir str.	Cum.	
4.	E.N.	1	bc	...	30.122	73.3	70.8	87	72.5	2	Cir.	...	
6.	N.E.	1	c	...	30.150	71.8	70.3	91	71.0	9	...	Cum.	
8.	N.E.	1	c	...	30.150	71.5	68.8	84	71.2	10	...	Cum.	
10.	N.E.	1	bc	...	30.188	71.3	69.3	88	71.0	6	...	Cum.	Sp. gr. 1.02600.
Midt.	E.	1	bc	...	30.166	71.0	68.8	87	71.2	8	...	Cum.	
Totals.	...	20	...	...	1886	22.5	117.3	96	19.3	84	...	Cir str.	
Mean.	E.N.E.	2	bc	...	30.157	71.9	69.8	88	71.6	7	...	Cum. & Str.	

## SUNDAY, 4TH.

2.	N.E.	2	bc	...	30.152	70.3	68.3	88	71.5	4	Cir.	Cm.&Str.	At noon, lat. 25° 33' N. long. 137° 57' E. Temperature by self-registering thermo- meter, max. 70° 5, min. 68° 0. Current, s. 56° w. 13'.
4.	N.E.	2	bc	...	30.124	69.8	67.8	88	71.5	4	Cir.	Cum.	
6.	N.E.	2	bc	...	30.165	69.0	67.0	88	71.0	4	...	Cm.&Cum.st	
8.	N.E.	4	bc	...	30.199	68.8	66.3	85	70.0	6	...	Cum.	
10.	E.N.E.	2	b	1	30.213	69.3	66.5	84	69.5	0	...	...	
Noon.	E.N.E.	3	b	...	30.163	69.3	64.8	76	69.0	0	...	...	
2.	E.N.E.	2	b	...	30.125	69.8	65.3	75	69.0	0	...	...	
4.	E.N.E.	2	b	1	30.104	70.8	64.8	73	69.5	0	...	...	
6.	E.N.	2	b	...	30.123	69.8	65.8	78	69.7	0	...	...	
8.	E.N.	2	b	...	30.145	69.8	65.3	81	69.0	0	...	...	
10.	E.N.	2	b	...	30.159	69.3	64.8	78	68.7	0	...	...	Sp. gr. 1.02596.
Midt.	E.	2	b	...	30.135	69.3	64.8	79	68.7	0	...	...	
Totals.	...	27	...	...	1807	115.3	71.5	13	117.1	18	...	Cir.	
Mean.	E.N.E.	2	bc	1	30.151	69.6	65.9	81	69.8	2	...	Cum. & Str.	

## MONDAY, 5TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea 0 to 5	Barometrical direct to 32° and Sea-Level	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	12	b	...	30.094	67.8	64.8	83	68.0	0	...	...	At noon, lat. 26° 29' S. long. 137° 58' E. Temperature by self-registering thermo- meter, max. 74°, min. 66°. Current, w. 4°. Rain to 6 A.M., none. Sp. gr. 1.02613.
4.	E.	12	b	...	30.081	67.8	64.3	81	68.0	0	...	...	
6.	S.E.	1	be	...	30.100	66.8	63.8	83	68.0	3	...	Cum.	
8.	S.	1	be	...	30.118	69.3	64.8	75	68.0	4	Cir.	Cum.&Str.	
10.	S.	1	b	...	30.118	72.8	66.8	70	68.5	0	...	...	
Noon.	S.	1	be	...	30.100	73.3	67.3	70	69.0	1	Cir.	...	
2.	S.E.	1	be	...	30.050	73.3	66.5	67	72.0	3	Cir cum.	...	
4.	S.E.	1	be	0	30.056	72.8	66.8	70	71.5	2	Cir str.	...	
6.	S.E.	0	be	...	30.062	71.8	67.0	75	70.2	1	...	Str.	
8.	S.E.	1	be	...	30.059	70.3	66.8	81	69.7	1	...	Str.	
10.	S.S.E.	0	bm	...	30.048	69.8	66.8	83	69.7	0	...	...	
Midt.	S.S.E.	1	bm	...	30.044	69.8	66.8	83	69.7	1	...	Cum.	
Totals.	...	12	...	...	930	5.6	72.5	81	112.3	16	...	...	Cum. & Str.
Mean.	S.E. 1/2 S.	1	bm	...	30.077	70.5	66.0	77	69.4	1	Cir.	...	

## TUESDAY, 6TH.

2.	S.S.E.	0	bm	...	30.022	68.8	65.8	83	68.5	0	...	...	At noon, lat. 27° 13' S. long. 137° 59' E. Temperature by self-registering thermo- meter, max. 73° 7', min. 68° 5'. Current, S. 17° E. 9'. Rain to 6 A.M., none. Swell from S. Upper clouds from W. 6 P.M., saw a whale. Band of cum str. clouds to S.W. Sp. gr. 1.02596.
4.	S.E.	1	bm	...	30.000	68.8	65.5	82	68.5	0	...	...	
6.	S.	0	be	...	30.029	69.8	67.8	88	69.0	6	...	Cum.	
8.	S.S.E.	1	be	...	30.013	70.5	68.8	89	69.5	2	Cir cum.	Str.	
10.	S.W.	2	b	...	30.030	70.8	69.3	91	69.7	0	...	...	
Noon.	S.W.	12	b	...	30.006	71.8	69.8	89	70.0	0	...	...	
2.	S.S.W.	12	be	...	29.956	72.8	70.3	87	70.0	2	Cir.	...	
4.	S.S.W.	3	be	...	29.945	72.3	69.8	87	72.5	6	Cir.	...	
6.	S.W.W.	3	be	...	29.943	70.8	69.8	94	71.5	4	Cir str.	Cum.	
8.	S.W.W.	3	be	...	29.944	69.8	68.8	94	68.0	2	...	Str.	
10.	S.W.W.	3	be	...	29.937	69.8	69.3	97	70.0	5	...	Cum.&Str.	Cum. & Str.
Midt.	W.S.	3	be	...	29.941	70.8	69.8	94	70.7	4	...	Cum.&Str.	
Totals.	...	23	...	...	11766	6.8	104.8	115	117.9	31	...	...	Cum. & Str.
Mean.	S.S.W.	2	bm	...	29.980	70.6	68.7	89	69.8	3	Cir.	...	

## WEDNESDAY, 7TH.

2.	W.S.W.	4	c	...	29.942	69.8	68.3	91	70.5	10	...	Nimb.	At noon, lat. 28° 26' S. long. 137° 45' E. Temperature by self-registering thermo- meter, max. 67° 5', min. 63° 0'. Current, S. 7°. Rain to 6 A.M., none. Sp. gr. 1.02594.
4.	S.W.	2	c	...	29.922	68.3	66.8	91	70.0	9	...	Cum.&Str.	
6.	Variable.	1	c	...	29.951	67.3	65.8	91	69.7	9	Str.	Cum.	
8.	N.E.	1	c	...	29.977	66.8	64.8	88	69.7	10	...	Cum.	
10.	S.	2	cpm	...	30.002	65.8	64.8	94	69.5	10	...	Cum.	
Noon.	S.	1	ocp	...	29.993	65.8	64.8	94	69.5	10	...	Cum.	
2.	S.	2	cp	...	30.002	65.5	64.3	93	69.5	10	...	Cum.	
4.	S.W.	4	cp	...	29.963	64.8	62.5	87	69.5	10	...	Cum.	
6.	S.S.E.	5	o	...	30.028	64.8	62.3	85	69.5	10	...	Cum.	
8.	E.S.E.	3	c	...	30.063	64.8	62.8	88	70.0	10	...	Cum.	
10.	N.E.	4	c	...	30.082	64.8	61.8	83	69.5	10	...	Cum.	Cum.
Midt.	N.E.	3	c	...	30.098	64.8	61.0	79	69.5	10	...	Cum.	
Totals.	...	32	...	...	9023	73.3	50.0	1064	116.4	118	...	...	Str. Cum.
Mean.	Variable.	3	cp	...	30.002	66.1	64.2	89	69.7	10	...	...	

## THURSDAY, 8TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometre (corrected for Sea and Sea Level).	Thermometer.			Humidity.	Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.	Wet Bulb.					Upper.	Lower.	
2.	N.E. E.	4	cq	...	30.068	63.8	59.8	77	69.2	10	...	...	Cum.	...	At noon, lat. 29° 58' S. long. 137° 4' E. Temperature by self-registering thermometer, max. 62.5, min. 56.2. Current, s. 7'. Rain to 6 A.M., none. Sp. gr. 1.02573.
4.	N.E. E.	4	c	...	30.047	63.0	58.8	76	68.7	10	...	...	Cum.	...	
6.	N.E. E.	4	od	...	30.111	60.8	57.8	82	68.7	10	...	...	Cum. & N.b.	...	
8.	E.N.E.	5	oe	...	30.085	61.8	57.8	77	69.0	10	...	...	Cir.	...	
10.	E.N.	4	orq	...	30.071	60.8	57.5	81	70.0	10	...	...	Str. & Cum.	...	
Noon.	E.N.	6	orq	...	30.043	60.8	57.5	81	70.0	10	...	...	Cum.	...	
2.	E.N.	3	orq	...	29.997	57.8	56.8	93	69.2	10	...	...	Cum. & Str.	...	
4.	E.N.	5	opq	...	29.963	58.8	57.8	94	69.0	10	...	...	Cum.	...	
6.	E.N.E.	4	od	...	29.954	59.8	59.3	97	70.2	10	...	...	Cum.	...	
8.	E.N.	6	opd	...	29.920	62.3	61.8	97	70.0	10	...	...	Cum. & Str.	...	
10.	E.N.	5	od	...	29.934	62.3	60.8	91	66.0	10	...	...	Cum.	...	
Midd.	E.N.	4	oe	4	29.886	63.3	62.3	94	65.0	10	...	...	Cum.	...	
Totals.	...	54	crq	13	.079	15.3	108.0	1040	105.0	120	...	...	Cir.	Cum. & Str.	
Mean.	E.N.E.	4		3	30.007	61.3	59.0	87	68.8	10	...	...	Cir.	Cum. & Str.	

## FRIDAY, 9TH.

2.	E.N.	5	oe	...	29.855	64.3	63.8	97	63.5	10	...	...	Cum.	...	At noon, lat. 31° 8' S. long. 137° 8' E. Temperature by self-registering thermometer, max. 67.0, min. 59.0. Current, s. 7'. Rain to 6 A.M., .21 inch. Sp. gr. 1.02548.
4.	E.N.	3	oe	...	29.817	64.3	63.8	97	64.0	10	...	...	Cum.	...	
6.	S.E. E.	2	cpq	...	29.816	64.8	64.8	100	64.0	10	...	...	Str.	...	
8.	S.W. E.	1	cpq	...	29.819	65.3	65.3	100	64.5	10	...	...	Str.	...	
10.	N.W.	0	or	...	29.823	65.3	64.8	97	64.7	10	...	...	Cum. & N.b.	...	
Noon.	S.W.S.	1	om	...	29.821	65.3	65.3	100	64.7	10	...	...	Cum. & Str.	...	
2.	S.E.	1	c	...	29.801	64.8	64.5	98	64.0	9	...	...	Cum. & Str.	...	
4.	S.E.	2	c	1	29.785	64.8	64.3	97	64.0	10	...	...	Cum. & Str.	...	
6.	S.W. W.	2	c	...	29.800	65.0	64.5	97	64.2	10	...	...	Cum. & Str.	...	
8.	S.W.S.	2	cp	...	29.810	65.0	64.8	99	64.0	10	...	...	Cum. & Str.	...	
10.	S.W.S.	3	be	...	29.822	65.3	64.8	97	64.5	8	...	...	Cum.	...	
Midd.	Variable.	5	eq	...	29.856	62.3	61.8	97	64.2	10	...	...	Cum. & Str.	...	
Totals.	...	27	cpq	...	.9825	56.5	52.5	96	50.3	117	...	...	Cum. & Str.	...	
Mean.	Variable.	2		1	29.819	64.7	64.4	98	64.2	10	...	...	Cum. & Str.	...	

## SATURDAY, 10TH.

2.	N.W. W.	5	ew	3	29.886	60.3	60.3	100	63.5	8	...	...	Cum.	...	At noon, lat. 32° 55' S. long. 138° 25' E. Temperature by self-registering thermometer, max. 63.5, min. 59.0. Current, s. 22' E. 42'. Rain to 6 A.M., .38 inch. Sp. gr. 1.02589.
4.	N.W.	3	c	3	29.884	60.3	58.8	91	64.0	10	...	...	Cum.	...	
6.	N.W.	4	be	3	29.912	60.8	58.8	88	67.5	8	...	...	Cum.	...	
8.	N.W.	3	be	3	29.926	60.8	57.8	82	68.0	6	...	...	Cir.	Cum. & Str.	
10.	N.W.	3	be	...	29.964	61.8	58.3	80	68.2	8	...	...	Cum. & Str.	...	
Noon.	N.W. W.	2	be	...	29.963	62.0	58.3	78	68.2	8	...	...	Cum. & Str.	...	
2.	N.W. W.	3	be	...	29.975	62.3	58.3	77	63.5	9	...	...	Cum. & Str.	...	
4.	N.W. W.	2	oe	...	29.976	60.8	57.3	79	63.0	10	...	...	Cum. & Str.	...	
6.	S.W. W.	0	c	...	29.994	60.8	57.3	79	63.0	10	...	...	Str.	...	
8.	Variable.	2	cp	...	29.989	61.8	58.8	82	68.0	10	...	...	Str.	...	
10.	W.S.	12	be	...	30.001	62.8	59.3	79	68.0	9	...	...	Cum. & Str.	...	
Midd.	W.S.	4	be	...	30.003	63.3	59.8	80	67.7	6	...	...	Cum. & Str.	...	
Totals.	...	33	bep	...	.11473	17.8	103.1	995	72.6	102	...	...	Cir.	Cum. & Str.	
Mean.	S.W.	3		3	29.956	61.5	58.6	83	66.0	8	...	...	Cir.	Cum. & Str.	

## SUNDAY, 11TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, corrected to 32° and Sea Level.	Thermometer		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	w.s.	4	bc	...	29.987	62.3	58.8	80	67.0	7	...	Cum.	At noon, lat. 34 54' N. long. 139° 27' E. Temperature by self-registering thermo- meter, max. 63.5, min. 60°. Rain to 6 A.M., none.
4.	w.s.	3	bc	...	29.971	61.8	58.8	82	65.5	6	...	Cum.	
6.	w.s. & N.	4	c	...	29.972	61.3	58.3	82	63.0	10	...	Cum.	
8.	sw & w.	0	bc	...	29.978	60.8	57.8	82	59.0	8	...	Cir. & Cum. str.	
10.	w.s.	12	bc	...	29.983	61.3	58.0	81	62.0	8	...	Cum. & Cum. str.	5 P.M., arrived at Yokohama.
Noon.	sw & w.	4	bc	...	29.954	61.8	57.3	75	62.7	8	...	Cir. & Str.	
2.	sw & w.	3	bc	...	29.922	62.8	56.0	64	63.0	8	...	Cum.	
4.	sw & w & w.	3	bc	...	29.885	61.8	55.8	67	56.5	9	...	Cum.	
6.	s. & E.	3	c	...	29.861	61.8	56.3	69	56.0	10	...	Cir. & Str.	Cum. Cum. Cum. & Str. Cum.
8.	s. & E.	2	c	...	29.848	61.3	55.5	68	...	10	...	Cum.	
10.	s. & E.	3	bc	...	29.856	59.8	54.3	68	...	6	...	Cir. & Str.	
Midt.	w. & s.	0	bc	...	29.869	58.3	54.3	76	...	12	...	Cum.	
Totals.	...	31	bc	...	11086	15.1	81.2	894	14.7	92	...	Cum., Str., & Cum. str.	
Mean.	sw & w.	3		...	29.924	61.3	56.8	74	61.2	8	...		

## MONDAY, 12TH.

2.	sw & w.	1	bc	...	29.867	56.0	53.8	86	...	3	...	Cir. & Str.	At Yokohama. Temperature by self-registering thermo- meter, max. 63°, min. 44°.
4.	sw & w.	2	c	...	29.877	55.3	52.3	81	...	6	...	Cum.	
6.	N. & E.	2	c	...	29.904	53.8	49.8	74	...	9	...	Cir. & Str.	
8.	N. & E. & E.	1	c	...	29.924	54.5	50.5	74	55.0	10	...	Cir. & Str.	
10.	N. & E. & E.	1	c	...	29.944	54.5	50.3	73	...	9	...	Cir. & Str.	Cum. & Str. Cum. & Str. Cum. Cum.
Noon.	N. & E. & E.	2	c	...	29.937	55.8	51.5	74	...	10	...	Cum. & Str.	
2.	N. & E.	1	c	...	29.940	56.3	51.8	73	...	8	...	Cum.	
4.	N. & E.	1	cp	...	29.942	54.3	49.8	72	...	10	...	Cum.	
6.	Variable.	1	bc	...	29.972	56.8	52.8	75	55.7	7	...	Cum.	Cum. Cum. Cum. Cum. & Str.
8.	E. & N.	1	bc	...	30.010	54.3	51.3	80	...	6	...	Cum.	
10.	E. & N.	1	bc	...	30.032	53.3	50.0	79	...	6	...	Cum. & Str.	
Midt.	E. & N.	1	b	...	30.050	52.8	49.5	79	...	0	...	...	
Totals.	...	15	bcp	...	11379	57.7	13.4	80	...	84	...	Cum. & Str.	
Mean.	N. & E. & N.	1		...	29.948	54.8	51.1	77	55.3	7	...		

## TUESDAY, 13TH.

2.	sw & w.	1	bc	...	30.061	49.8	47.8	86	...	4	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 61.5, min. 44.0.
4.	sw & w.	1	bc	...	30.055	47.3	43.5	74	...	1	...	Cum.	
6.	sw & w.	1	bc	...	30.088	45.3	41.8	75	54.0	7	...	Cum.	
8.	sw & w.	0	b	...	30.116	49.3	44.8	70	...	0	...	...	
10.	SE. & N.	1	b	...	30.133	50.8	48.3	55	...	0	...	...	Cum. Cum. Cum. Cum.
Noon.	NE. & N.	1	b	...	30.140	58.8	50.8	57	...	0	...	...	
2.	NE. & N.	1	bc	...	30.125	58.3	50.8	59	...	1	...	Cum.	
4.	SE. & E.	1	bc	...	30.116	58.8	51.3	59	...	1	...	Cir.	
6.	s. & E.	1	bc	...	30.133	57.8	51.8	66	56.2	3	...	Cum.	Cum. Cum. Cum. Cum.
8.	s. & E.	1	bc	...	30.175	54.8	50.8	75	...	1	...	Cum.	
10.	Calu.	0	b	...	30.233	53.3	48.8	72	...	0	...	...	
Midt.	s. & w.	1	b	...	30.243	50.8	46.8	74	...	0	...	...	
Totals.	...	10	bc	...	1618	64.1	97.3	822	10.2	18	...	Cir.	Cum.
Mean.	Variable.	1		...	30.135	53.4	48.1	68	55.1	1	...		

## WEDNESDAY, 14TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer- reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Variable.	0	b	...	30.220	48.8	45.8	79	...	0	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 67°·5, min. 44°·0.
4.	sw $\frac{1}{2}$ w.	1	bm	...	30.234	47.8	44.0	74	...	0	...	...	
6.	sw $\frac{1}{2}$ w.	1	bm	...	30.284	45.8	41.3	70	56.0	0	...	...	
8.	sw $\frac{1}{2}$ w.	1	bm	...	30.294	49.8	43.8	63	...	0	...	...	
10.	Calm.	0	bc	...	30.280	58.8	51.8	61	...	3	Cir str.	...	
Noon.	Calm.	0	bc	...	30.232	61.8	54.8	62	...	1	Cir.	...	
2.	se $\frac{1}{2}$ e.	1	bc	...	30.167	63.8	56.8	63	...	5	...	Cum.	
4.	se $\frac{1}{2}$ e.	1	bc	...	30.125	64.8	57.8	63	...	5	...	Cm. str.	
6.	s.	2	c	...	30.117	60.3	58.8	91	58.0	10	Cir str.	Cum.	
8.	se $\frac{1}{2}$ e.	1	c	...	30.087	59.3	54.3	71	...	10	...	Cm.&Str.	
10.	sw $\frac{1}{2}$ w.	2	o	...	30.056	59.8	54.8	71	...	10	...	Cm.&Str.	
Midt.	sw $\frac{1}{2}$ w.	3	o	...	30.014	59.8	55.3	73	...	10	...	Cm.&Str.	
Totals.	...	13		...	2119	680.6	19.3	841	...	54			
Mean.	Variable.	1	bm	...	30.177	56.7	51.6	70	57.0	5	Cir str.	Cum. & Str.	

## THURSDAY, 15TH.

2.	sw $\frac{1}{2}$ w.	3	ocp	...	29.920	57.8	56.3	90	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 71°, min. 51°·2.  2.45 p.m., wind shifted suddenly.
4.	sw $\frac{1}{2}$ s.	1	ocp	...	29.844	57.3	55.8	90	...	10	...	Cum.	
6.	sw $\frac{1}{2}$ w.	4	ocp	...	29.776	55.8	54.8	93	56.5	10	Str.	Cum.	
8.	sw $\frac{1}{2}$ w.	2	ocp	...	29.696	57.3	56.8	97	...	10	Str.	Cum.	
10.	sw $\frac{1}{2}$ w.	2	ocp	...	29.556	61.8	61.3	97	...	10	Str.	Cum.	
Noon.	sw $\frac{1}{2}$ w.	4	ocp	...	29.498	64.3	63.3	94	...	8	...	Cum.	
2.	s $\frac{1}{2}$ w.	2	bcq	...	29.415	67.8	64.3	81	...	8	Cir str.	Cir cum.	
4.	s $\frac{1}{2}$ w.	1	bcq	...	29.426	65.8	63.3	85	...	7	...	Cir cum.	
6.	s.e.	2	bc	...	29.465	61.8	60.3	91	57.0	8	...	Cum.	
8.	nnw $\frac{1}{2}$ w.	4	cq	...	29.546	61.8	54.8	62	...	10	...	Cum.	
10.	n $\frac{1}{2}$ w.	5	cq	...	29.582	58.5	51.5	61	...	10	...	Cum.	
Midt.	n $\frac{1}{2}$ w.	4	cq	...	29.604	56.0	48.8	59	...	10	...	Cum.	
Totals.	...	34		...	7324	726.0	91.3	1000	...	111			
Mean.	Variable.	3	cqtr	...	29.610	60.5	57.6	83	56.7	9	Cir str.	Cir cum. & Cum.	

## FRIDAY, 16TH.

2.	s $\frac{1}{2}$ e.	5	cq	...	29.639	54.3	47.8	62	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 60°·5, min. 50°·5.
4.	s.e.	1	cq	...	29.649	53.3	46.8	62	...	10	...	Cm.&Str.	
6.	s.e.	2	e	...	29.692	51.8	46.8	69	56.0	10	...	Cm.&Str.	
8.	s.n.e.	3	e	...	29.736	53.3	46.3	59	...	10	...	Cm.&Str.	
10.	s.e.	1	bc	...	29.744	56.5	49.5	60	...	8	...	Cm.&Str.	
Noon.	s.n.e.	2	bc	...	29.729	59.0	52.3	62	...	9	...	Cm.&Str.	
2.	e.	2	bc	...	29.725	57.8	52.8	71	...	9	...	Cm.&Str.	
4.	e.n.e.	2	c	...	29.707	55.8	49.8	65	...	9	...	Str.	
6.	e.	1	c	...	29.730	54.8	50.3	73	56.2	10	...	Cm.&Str.	
8.	s.n.e.	1	c	...	29.745	54.5	49.8	71	...	10	...	Cum.	
10.	s.n.e.	...	...	...	29.774	51.8	49.8	80	...	...	...	Cum.	
Midt.	s $\frac{1}{2}$ e.	...	...	...	29.825	49.8	47.8	86	...	...	...	...	
Totals.	...	20		...	8695	52.7	109.8	826	...	95			
Mean.	s.e. $\frac{1}{2}$ n.	2	bcq	...	29.725	54.4	49.1	69	56.1	9	...	Cum. & Str.	

## SATURDAY, 17TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Temperature of Air, 0 to 50.	Thermometer, Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.									Upper.	Lower.	
2.	s.w.	2	c	...	29.779	48.8	46.8	86	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 69°, min. 45°.
4.	s.w.	3	cr	...	29.777	47.8	45.8	86	...	10	...	Cum.	
6.	s.w.s.w.	1	o	...	29.803	46.3	44.8	80	55.5	10	...	Cm & Cum str.	
8.	s.w.s.w.	1	o	...	29.842	47.0	45.3	88	...	9	Cir cum.	Cum.	
10.	s.w.s.w.	1	c	...	29.861	48.8	45.5	78	...	9	...	Cm. & Str.	
Noon.	s.w.s.w.	1	bc	...	29.853	51.0	46.3	69	...	8	...	Cum.	
2.	E.N.E.	2	bc	...	29.825	54.8	48.8	65	...	7	Cir.	Cum.	
4.	E.N.E.	1	bc	...	29.818	56.8	49.8	61	...	7	Cir.	Cum.	
6.	s.w.	1	cr	...	29.833	53.8	49.0	70	56.0	10	...	Cum.	
8.	s.w.	1	cr	...	29.916	48.8	46.8	86	...	10	...	Cum.	
10.	s.w.	1	cr	...	29.997	46.5	45.3	91	...	10	...	Cum.	
Midt.	s.w.	1	c	...	30.005	45.5	43.8	87	...	10	...	Cum.	
Totals.	...	16	bcpr	...	10309	115.9	78.0	957	...	110	Cir cum.	Cum.	
Mean Variable.	1	...	...	...	29.859	49.7	46.5	80	55.7	9			

## SUNDAY, 18TH.

2.	s.w.	1	bc	...	30.029	45.3	39.3	60	...	5	Cir.	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 62° 5, min. 42° 0.
4.	s.w.	1	bc	...	30.039	44.8	43.8	92	...	5	Cir.	Cum.	
6.	s.w.	1	bc	...	30.107	43.8	42.3	88	56.0	3	Str.	Cum.	
8.	Caln.	0	bc	...	30.152	50.5	47.8	82	...	1	...	Cum.	
10.	s.w.	1	bc	...	30.159	53.3	50.3	80	...	1	...	Cm. & Str.	
Noon.	s.w.	1	bc	...	30.142	55.0	49.8	69	...	2	...	Cir cum.	
2.	s.w.	4	bs	...	30.083	57.8	51.8	66	...	0	...	...	
4.	s.w.	2	b	...	30.031	59.8	51.8	58	...	0	...	...	
6.	s.w.s.w.	4	bs	...	30.007	60.8	53.3	60	56.5	0	...	...	
8.	s.w.s.	6	bpm	...	30.012	58.5	53.3	70	...	0	...	...	
10.	s.w.s.	4	bpm	...	30.038	58.0	53.3	72	...	1	...	Nim.	Str.
Midt.	s.w.s.	5	bpm	...	30.032	57.3	53.8	78	...	4	...	Str.	
Totals.	...	30	bcpm	...	...	644.9	590.6	875	...	22	Cir.	Cum. & Str.	
Mean Variable.	3	...	...	...	30.069	53.7	49.2	73	56.2	2			

## MONDAY, 19TH.

2.	s.w.s.	5	bcp	...	30.001	58.3	53.8	73	...	5	...	Cum str.	At Yokohama. Temperature by self-registering thermo- meter, max. 71° 7, min. 49° 5.
4.	s.w.s.w.	2	bcp	...	29.999	57.8	53.8	76	...	3	...	Str.	
6.	s.w.s.w.	4	bc	...	30.024	56.8	53.8	81	56.0	6	Cir str.	...	
8.	s.w.s.w.	1	c	...	30.022	57.8	53.8	76	...	10	Cir str.	...	
10.	s.w.s.	1	bc	...	30.012	62.8	55.8	63	...	6	Cir str.	...	
Noon.	E.	3	bc	...	29.971	66.0	59.3	65	...	8	...	Cum.	
2.	E.	1	bc	...	29.966	67.3	59.8	62	...	4	...	Cm. & Str.	
4.	N.E.	1	bc	...	29.969	69.3	60.8	58	...	6	Cir.	Cum.	
6.	E.	1	bc	...	29.966	63.3	59.0	76	57.5	2	Cir cum.	...	
8.	N.E.	2	bpm	...	30.030	59.3	56.3	82	...	3	...	Cum.	
10.	N.E.	1	bc	...	30.039	58.8	56.8	88	...	3	...	Cm. & Str.	Cum.
Midt.	N.E.	2	bc	...	30.075	57.8	53.8	76	...	5	...	Cum.	
Totals.	...	24	bcpm	...	...	735.3	76.8	876	...	61	Cir cum. & Cir str.	Cum. & Str.	
Mean Variable.	2	...	...	...	30.005	61.3	56.4	73	56.7	5			

## TUESDAY, 20TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	1	c	...	30.058	56.8	52.0	71	...	9	...	Cm.&Cumst.	At Yokohama. Temperature by self-registering thermo- meter, max. 68°, min. 53° 5.
4.	N.W.	1	c	...	30.046	55.8	51.3	73	...	10	...	Str.&Cum.	
6.	N.W.	1	bc	...	30.056	54.8	51.3	78	58.0	7	...	Str.&Cum.	
8.	N.W.	1	c	...	30.049	55.3	50.8	73	...	9	...	Cum.	
10.	N.W.	1	oe	...	30.025	57.8	52.8	71	...	10	...	Str.&Cum.	
Noon.	N.W. ½ W.	1	oe	...	29.982	61.3	55.3	67	...	10	...	Cum.	
2.	N.E.	1	c	...	29.901	66.3	58.8	62	...	10	...	Cum.	
4.	E.	1	c	...	29.865	64.3	58.3	67	...	10	...	Cum.	
6.	Calm.	0	bc	...	29.840	62.8	57.8	72	59.0	8	Cir str.	...	
8.	Calm.	0	c	...	29.812	60.8	57.8	82	...	9	...	Cm.&Str.	
10.	Variable.	1	oe	...	29.829	57.8	54.8	81	...	10	...	Cm.&Str.	
Midt.	Calm.	0	oe	...	29.810	56.8	53.8	81	...	10	...	Cum.	
Totals.	...	11	c	...	1127.3	710.6	54.8	38	...	112	Cir str.	Cum. & Str.	
Mean.	N.N.E.	1		...	29.939	59.2	54.6	73	58.5	9			

## WEDNESDAY, 21st.

2.	Calm.	0	oe	...	29.754	56.8	53.3	78	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 61°, min. 52° 5.		
4.	Calm.	0	cr	...	29.727	55.8	52.8	81	...	10	...	Cum.			
6.	Calm.	0	cr	...	29.672	53.3	51.8	90	58.2	9	...	Cm.&Str.			
8.	N.W.	1	c	...	29.678	53.8	52.3	90	...	10	Str.	Cum.			
10.	Variable.	1	ocr	...	29.639	55.5	54.5	93	...	10	...	Cum.			
Noon.	E.N.	1	oe	...	29.562	57.0	56.0	93	...	10	...	Cum.			
2.	SE ½ E.	3	bc	...	29.482	59.8	58.3	91	...	8	...	Cum.			
4.	SE ½ E.	3	oe	...	29.418	59.8	58.3	91	...	10	...	Cum.			
6.	N.W.	4	ocl	...	29.424	57.3	54.8	84	58.5	10	...	Cm.&Str.			
8.	Calm.	0	cr	...	29.433	55.8	54.5	91	...	9	...	Cm.&Nlb.			
10.	N.W.	2	clq	...	29.463	54.8	49.8	70	...	10	...	Cm.&Str.			
Midt.	N.W.	6	clq	...	29.509	54.3	47.3	59	...	10	...	Cum.			
Totals.				...	21	cqlr	...	676.1	74.0	48.7	1011	...	116	Str.	Cum., Str., & Nimb.
Mean.				Variable.	2		...	29.563	56.2	53.6	84	58.3	10		

## THURSDAY, 22nd.

2.	sw ½ w.	7	bqcl	...	29.565	53.3	45.8	57	...	7	...	Cm.&Cum	At Yokohama. Temperature by self-registering thermo- meter, max. 67° 5, min. 47° 5.
4.	sw ½ w.	5	bq	...	29.620	50.8	44.8	63	...	0	...		
6.	sw ½ w.	3	bq	...	29.713	49.2	44.5	68	58.0	0	...		
8.	sw ½ w.	2	b	...	29.795	56.8	49.2	59	...	0	...		
10.	ws ½ s.	1	b	...	29.805	61.8	51.8	50	...	0	...		
Noon.	S.E.	2	b	...	29.854	62.8	53.3	53	...	0	...		
2.	sw ½ s.	3	bun	...	29.869	65.8	55.8	52	...	0	...		
4.	sw ½ s.	1	bun	...	29.882	65.3	56.8	57	...	0	...		
6.	sw ½ s.	1	bun	...	29.925	64.3	56.8	61	58.5	0	...		
8.	Variable.	0	bun	...	29.966	59.8	55.8	76	...	0	...		
10.	Variable.	1	bun	...	29.965	56.8	55.0	88	...	0	...		
Midt.	Variable.	0	bun	...	29.972	56.3	54.3	87	...	0	...		
Totals.				...	26								
				bqm	...	3941	703.1	24.0	771	...	7		
Mean.				Variable.	2	...	29.828	58.6	52.0	64	58.2	1	Cir cum. & Cum.

## FRIDAY, 23d APRIL 1875.

Hour	Wind.		Weather.	State of Sea, at 6 A.	Barometer reduced to 32 and Sea Level	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bwy	...	29.921	52.8	59.8	86	...	2	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 70° 5, min. 48° 5.
4.	SW $\frac{1}{2}$ W.	1	bwy	...	29.935	50.8	49.3	90	...	0	...	...	
6.	SW $\frac{1}{2}$ W.	2	b	...	29.958	50.3	48.8	90	58.0	3	Cir str.	...	
8.	SW $\frac{1}{2}$ W.	1	b	...	29.966	59.8	55.0	72	...	0	...	...	
10.	E.	1	b	...	29.950	61.0	56.3	73	...	0	...	...	
Noon.	SW $\frac{1}{2}$ W.	3	bq	...	29.999	64.5	59.3	71	...	0	...	...	
2.	SW $\frac{1}{2}$ W.	5	bq	...	29.903	68.3	59.8	58	...	2	Cir.	Cum.	
4.	SW $\frac{1}{2}$ W.	3	bq	...	29.935	68.8	60.3	58	...	1	Cir str.	Cum.	
6.	SW $\frac{1}{2}$ W.	5	bq	...	29.942	65.8	58.8	64	58.0	1	Cir str.	...	
8.	SW $\frac{1}{2}$ W.	1	b	...	29.948	62.8	57.8	72	...	2	Str.	Cum.	
10.	SW $\frac{1}{2}$ W.	3	b	...	29.944	62.0	57.8	76	...	3	...	Cum.	
Midt.	SW $\frac{1}{2}$ W.	1	b	...	29.932	61.0	57.8	81	...	2	...	Cum.	
Totals.	...	26	bq	...	11933	7.9	71.8	891	...	16	Cir str.	Cum.	
Mean. Variable.	2	...	...	...	29.994	60.7	56.0	74	58.0	1	...	...	

## SATURDAY, 24th.

2.	SW $\frac{1}{2}$ W.	3	...	...	29.917	60.8	55.8	72	...	...	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 67°, min. 60°.
4.	SW $\frac{1}{2}$ W.	2	...	...	29.853	61.3	56.3	72	...	...	...	...	
6.	SW $\frac{1}{2}$ W.	1	bcp	...	29.864	60.8	57.8	82	...	...	Cum.&Nb.	...	
8.	SW $\frac{1}{2}$ W.	2	b	...	29.849	62.8	59.8	80	58.0	7	Cum.&Str	...	
10.	SW $\frac{1}{2}$ W.	2	c	...	29.802	69.3	61.8	75	...	10	Str.&Cum.	...	
Noon.	SW $\frac{1}{2}$ W.	2	c	...	29.772	65.8	62.3	81	...	10	Cum.	...	
2.	SW $\frac{1}{2}$ W.	3	cp	...	29.749	63.8	63.0	84	...	10	Cum.	...	
4.	S.	1	c	...	29.587	63.3	62.0	92	58.0	9	Cir.	Cum.	
6.	S. & E.	1	cpd	...	29.508	62.8	61.8	94	...	8	Cum.&Nb.	...	
8.	SW $\frac{1}{2}$ W.	2	c	...	29.454	62.8	61.8	94	...	10	Cum.	...	
10.	SW $\frac{1}{2}$ W.	5	ed	...	29.496	62.3	61.3	94	...	9	Cum.&Nb.	...	
Midt.	SW $\frac{1}{2}$ W.	6	edq	...	29.496	62.3	61.3	94	...	9	...	...	
Totals.	...	31	cpqd	...	8408	38.1	6.2	1017	...	91	Cir.	Cum., Str., & Nimb.	
Mean.	S.	3	...	...	29.701	63.2	60.5	85	58.0	9	...	...	

## SUNDAY, 25th.

2.	SW $\frac{1}{2}$ W.	3	cp	...	29.368	60.5	58.8	90	...	10	...	Cum.&Nb.	At Yokohama. Temperature by self-registering thermo- meter, max. 67°, min. 50° 5. 2.30 A.M., wind fell and shifted to S.E. Vivid lightning and heavy thunder. Cum. with rain-squalls. 3.15 A.M., clouds broke and gradually cleared.
4.	N.E.	1	cpd	...	29.377	55.3	53.5	87	...	10	...	Cum.&Nb.	
6.	N.E.	4	b	...	29.463	52.3	47.8	71	58.0	6	Cir.	Cum.	
8.	S.	3	b	...	29.508	54.3	49.3	69	...	2	...	Cum.	
10.	SW $\frac{1}{2}$ W.	2	b	...	29.520	61.0	52.8	57	...	4	Cir.	Cum.	
Noon.	S.E.	3	b	...	29.576	63.3	53.8	53	...	5	Cir.	Cum.	
2.	E.	2	b	...	29.595	64.3	54.8	53	...	6	...	Cum.&Str.	
4.	E. & E.	1	b	...	29.581	66.3	55.8	50	...	4	...	Cum.&Str.	
6.	SW $\frac{1}{2}$ W.	1	b	...	29.601	61.8	52.8	54	50.5	3	...	Cum.&Str.	
8.	E. & E.	1	b	...	29.632	58.8	52.8	66	...	1	...	Cum.	
10.	SW $\frac{1}{2}$ W.	1	b	...	29.673	56.8	50.8	65	...	5	...	Cum.	
Midt.	SW $\frac{1}{2}$ W.	1	b	...	29.697	53.3	45.8	57	...	3	...	Cum.&Str.	
Totals.	...	23	bepd	...	6591	708.9	28.8	772	...	59	Cir.	Cum., Str., & Nimb.	
Mean. Variable.	2	...	...	...	29.549	59.0	52.4	64	58.8	5	...	...	

## MONDAY, 26TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	Variable.	1	e	...	29.689	50.8	44.8	63	...	9	...	Cum.	At Yokoska. Temperature by self-registering thermo- meter, max. 65°, min. 46°.
4.	S.W.	1	bc	...	29.727	49.3	43.3	62	...	2	...	Cum.	
6.	S.W.	3	bc	...	29.751	47.8	42.5	66	58.2	3	...	Cir cum.	
8.	S.W.	1	bc	...	29.745	51.8	47.5	73	...	3	...	Cir cum.	Proceeded from Yokohama to Yokoska to dock ship.
10.	S.E.E.	1	bc	...	29.743	56.5	47.8	53	...	1	...	Cir.	
Noon.	sws.	4	bc	...	29.731	59.8	50.3	52	...	5	...	Cir cum.	
2.	sws.	2	bc	...	29.698	60.8	49.8	47	...	4	...	Cir.	Cum.
4.	sws.	3	bc	...	29.686	61.3	51.8	52	...	5	...	Cir.	Cum.
6.	sws.	1	bc	...	29.693	63.0	52.8	51	59.0	2	...	Cir.	Cum.
8.	sws.	1	bc	...	29.722	58.5	49.8	54	...	4	...	Cum.&Str.	Cum.
10.	sws.	1	e	...	29.759	56.8	49.5	60	...	9	...	Cum.	Cum.
Midd.	Variable.	2	e	...	29.788	64.8	47.8	60	...	10	...	Cum.&Str.	Cum.
Totals.	...	21	bc	...	8702	671.2	97.7	693	...	57	Cir.	Cir cum., Cum., & Str.	
Mean.	Variable.	2		...	29.725	55.9	48.1	58	58.6	5			

## TUESDAY, 27TH.

2.	Calm.	0	bc	...	29.781	53.3	46.8	62	...	9	...	Cum.&Str.	In dock, Yokoska.
4.	S.W.	1	bc	...	29.778	53.3	47.8	67	...	8	...	Cum.	Temperature by self-registering thermo- meter, max. 56° 2', min. 51°.
6.	Calm.	0	e	...	29.766	51.8	47.3	71	58.5	10	...	Str.	
8.	S.W.	1	cd	...	29.788	52.3	48.0	73	...	10	...	Cum.	
10.	S.W. & W.	1	or	...	29.790	50.3	47.8	83	...	10	...	Cum.	9 A.M., docked ship.
Noon.	N.	3	or	...	29.776	49.8	47.8	86	...	10	...	Cum.	
2.	N.E.	1	oed	...	29.739	50.8	48.8	86	...	10	...	Cum.&Str.	
4.	N.N.E.	2	ocr	...	29.697	50.8	49.8	93	...	10	...	Cum.&Str.	Cum.
6.	N.	1	cr	...	29.666	50.8	49.3	99	...	10	...	Cum.	Cum.
8.	N.	1	oe	...	29.680	50.8	49.3	90	...	10	...	Cum.	Cum.
10.	N.	3	e	...	29.685	52.0	50.0	86	...	10	...	Cum.	Cum.
Midd.	N.	2	e	...	29.689	51.8	50.0	87	...	10	...	Cum.	Cum.
Totals.	...	16	edr	...	8835	17.8	102.7	974	...	117	...	Cum. & Str.	
Mean.	N.	1		...	29.736	51.5	48.6	81	58.5	10			

## WEDNESDAY, 28TH.

2.	N.	3	oe	...	29.712	51.3	49.0	84	...	10	...	Cum.	In dock, Yokoska. Temperature by self-registering thermo- meter, min. 48° 5'.
4.	N.	1	oe	...	29.716	51.0	48.8	85	...	10	...	Cum.	
6.	N.	2	bc	...	29.736	50.8	46.8	74	...	9	...	Cum.	
8.	N.	1	bc	...	29.704	54.8	48.8	65	...	8	...	Cum.	Calm.
10.	N.	1	bc	...	29.828	56.8	49.8	61	...	7	...	Cum.	
Noon.	N.	1	bc	...	29.827	57.3	49.8	59	...	9	...	Cum.	
2.	N.N.E.	2	bc	...	29.825	60.0	50.5	52	...	6	...	Cum.	Cum.
4.	S.S.W.	1	bc	...	29.814	59.8	49.3	48	...	8	...	Cir cum.	Cir cum.
6.	S.S.W.	2	bc	...	29.821	56.8	51.8	70	...	8	...	Cir cum.	Cum.
8.	N.	1	bc	...	29.880	53.8	49.8	74	...	8	...	Cum.	Cum.
10.	Calm.	0	bc	...	29.884	52.8	49.8	80	...	6	...	Cum.	Cum.
Midd.	Calm.	0	bc	...	29.897	52.3	49.3	80	...	5	...	Cum.	Cum.
Totals.	...	15	bc	...	9644	57.5	113.5	832	...	94	...	Cir cum. & Cum.	
Mean.	Variable.	1		...	29.804	54.8	49.5	69	...	8			

## THURSDAY, 29TH APRIL 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	N.	1	bcp	...	29.895	53.3	50.8	83	...	5	...	...	Cum.	In dock, Yokoska.
4.	N.	1	bc	...	29.937	49.3	46.8	83	...	12	...	...	Cir cum.	
6.	N.	1	c	...	29.980	50.3	47.8	83	...	10	...	...	Cir cum.	
8.	N.	1	c	...	30.017	52.3	48.3	74	...	10	...	...	Cum.	
10.	N.	1	bc	...	30.027	57.3	52.8	73	...	6	...	Cir.	Cum.	
Noon.	N.	1	bc	...	30.022	58.8	53.3	68	...	1	...	...	Cum.	
2.	N.	1	bc	...	29.995	63.8	57.3	65	...	1	...	...	Cum.	
4.	Calm.	0	bc	...	29.976	63.3	54.8	57	...	1	...	...	Cum.	
6.	Calm.	0	bc	...	29.981	62.0	55.8	66	...	1	...	...	Cum.	
8.	Calm.	0	bc	...	30.016	57.5	54.0	78	...	1	...	...	Cum.	
10.	Calm.	0	b	...	30.014	54.8	51.8	81	...	0	...	...	...	
Midt.	Calm.	0	b	...	30.021	52.8	50.8	86	...	0	...	...	...	
Totals.	...	9	bcp	...	11881	75.5	24.3	897	...	38	...	...	Cir cum. & Cum.	
Mean.	N.	1		...	29.990	56.3	52.0	75	...	3	...	...	...	

## FRIDAY, 30TH.

2.	Calm.	0	b	...	29.999	51.8	49.8	86	...	0	...	...	...	In dock, Yokoska. Temperature by self-registering thermo- meter, max. 58°,
4.	Calm.	0	bc	...	29.981	51.8	49.8	86	...	12	...	...	Cum.	
6.	Calm.	0	bc	...	29.962	53.5	51.8	88	...	8	...	...	Cm.&Str.	
8.	Calm.	0	cr	...	29.983	53.8	52.5	91	...	10	...	...	Cum.	
10.	Calm.	0	or	...	29.948	54.8	53.8	93	...	10	...	...	Nimb.	
Noon.	Calm.	0	cd	...	29.873	55.8	53.8	87	...	10	...	...	Cm.&Str.	
2.	Calm.	0	cr	...	29.800	55.8	54.8	93	...	10	...	...	Cm.&Str.	
4.	Calm.	0	bcp	...	29.749	56.8	55.8	93	...	8	...	...	Cm.&Str.	
6.	Calm.	0	c	...	29.689	56.8	55.8	93	...	9	...	Cir cum.	Cum.	
8.	s.w.	3	opl	...	29.656	56.0	52.8	80	...	10	...	...	Cum.	
10.	s.w.	1	bcq	...	29.661	56.8	52.8	75	...	5	...	...	Cum.	
Midt.	Calm.	0	bc	...	29.670	54.3	51.8	83	...	5	...	...	Cum.	
Totals.	...	...	cpqr	...	9971	58.0	35.3	1048	...	87	...	...	Cir cum. & Nimb.	
Mean.	Calm.	0		...	29.831	54.8	52.9	87	...	7	...	...	...	

## SATURDAY, 1ST MAY.

2.	s.w.	3	bcq	...	29.687	52.8	49.8	80	...	6	...	...	Cum.	In dock, Yokoska. Temperature by self-registering thermo- meter, max. 64°5, min. 48°5.
4.	s.w.	0	bc	...	29.681	51.3	48.8	83	...	7	...	...	Cm.&Str.	
6.	N.	1	bc	...	29.707	48.8	46.8	86	...	5	...	...	Cm.&Str.	
8.	E.S.E.	0	bc	...	29.767	55.0	50.8	74	...	4	...	...	Cir.	
10.	s.w.	1	bc	...	29.778	59.3	50.8	55	...	5	...	...	Cir.	
Noon.	s.w.	1	bc	...	29.819	60.8	50.8	50	...	6	...	...	Cir cum.	
2.	s.w.	1	bc	...	29.798	63.8	53.3	50	...	0	...	...	...	
4.	S.E.	1	bc	...	29.815	63.8	52.8	48	...	1	...	...	Cir str.	
6.	Calm.	0	bc	...	29.864	63.3	53.8	53	...	4	...	...	Cir cum.	
8.	N.	1	bc	...	29.934	59.8	50.8	54	...	4	...	...	Cm.&Str.	
10.	N.	3	bc	...	29.945	57.8	53.0	72	...	4	...	...	Cm.&Str.	
Midt.	N.	1	bc	...	29.977	57.5	52.8	71	...	7	...	...	Cum.	
Totals.	...	13	bc	...	9772	694.0	14.3	776	...	53	...	...	Cir cum. & Cum. & Str.	
Mean.	Variable.	1		...	29.814	57.8	51.2	65	...	4	...	...	...	

## SUNDAY, 2d MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.	3	bc	...	30.006	54.8	50.0	71	...	2	...	Cum.	At Yokoska. Temperature by self-registering thermo- meter, max. 64°·5, min. 52°·0.
4.	N.	1	bc	...	30.018	53.3	48.8	72	...	1	...	Cum.	
6.	N.	2	bc	...	30.065	53.8	48.8	69	...	5	...	Cm.&Str.	
8.	N.	1	bc	...	30.084	54.3	48.8	67	...	7	...	Cm.&Str.	
10.	N.	1	bc	...	30.099	57.8	52.8	71	...	5	...	Cum.	
Noon.	N.	1	bc	...	30.098	60.3	54.8	68	...	5	...	Cum.	
2.	N.	1	bc	...	30.070	62.5	56.0	65	...	7	...	Cum.	
4.	E.S.E.	3	cpt-bc	...	30.083	57.8	54.8	81	...	9	...	Cum.	
6.	E.S.E.	1	bc	...	30.092	56.8	53.8	81	...	8	Cir cum.	Cm.&Str.	
8.	E.S.E.	1	c	...	30.107	55.8	52.8	81	...	9	...	Cm.&Nb.	
10.	N.	1	bc	...	30.125	54.3	51.8	83	...	5	...	Cum.	
Midt.	N.	1	c	...	30.190	54.8	51.8	81	...	10	...	Cum.	
Totals.	...	17	bcpt	...	1037	76.3	25.0	890	...	73	Cir cum.	Cum., Str., & Nimb.	
Mean.	NNE½E.	1		...	30.086	56.4	52.1	74	...	6			

## MONDAY, 3d.

2.	N.	4	c	...	30.198	52.3	50.5	87	...	9	...	Cum.	At Yokoska. Temperature by self-registering thermo- meter, max. 63°, min. 52°·5.  2 P.M., unlocked ship and steamed to Yokohama.
4.	N.	1	c	...	30.209	51.8	49.8	86	...	9	...	Cum.	
6.	N.	1	c	...	30.200	51.8	49.5	85	...	9	...	Cum.	
8.	N.	2	bc	...	30.205	52.3	49.8	83	...	9	...	Cum.	
10.	N.N.E.	1	bc	...	30.288	54.8	52.8	87	...	9	...	Cum.	
Noon.	N.	1	bc	...	30.285	57.3	51.8	68	...	9	...	Cum.	
2.	N.	1	bc	...	30.270	61.8	56.3	69	...	5	...	Cum.	
4.	E.N.E.	2	bc	...	30.268	59.0	53.8	70	...	5	Cir cum.	Cum.	
6.	E.N.E.	1	bc	...	30.261	58.5	53.3	70	60.0	5	...	Cir cum.	
8.	E.S.E.	2	b	...	30.257	57.3	51.8	68	...	0	...	...	
10.	E.N.E.	3	b	...	30.304	55.8	51.3	72	...	0	...	...	
Midt.	N.E.	2	b	...	30.323	54.8	50.8	75	...	0	...	...	
Totals.	...	21	bc	...	3119	67.5	21.5	920	...	69	Cir cum.	Cum.	
Mean.	NE½N.	2		...	30.260	55.6	51.8	77	60.0	6			

## TUESDAY, 4th.

2.	SW½W.	1	b	...	30.329	51.8	48.8	80	...	0	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 69°, min. 48°.
4.	SW½W.	1	b	...	30.337	50.8	48.8	80	...	0	...	...	
6.	SW½W.	1	b	...	30.364	50.5	47.8	82	58.7	0	...	...	
8.	SW½W.	1	b	...	30.397	53.3	48.8	71	...	0	...	...	
10.	N.E.	1	b	...	30.379	59.8	51.8	58	...	0	...	...	
Noon.	E½N.	1	b	...	30.362	63.8	55.3	57	...	0	...	...	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	E.	1	bc	...	30.309	66.3	57.3	50	...	...	...	Cum.	
6.	E.	1	bc	...	30.309	61.8	54.5	61	60.7	1	...	Str.	
8.	E.	1	b	...	30.334	58.5	51.8	62	...	0	...	...	
10.	E½N.	1	b	...	30.373	56.3	52.8	78	...	0	...	...	
Midt.	Calm.	0	b	...	30.385	53.8	50.8	80	...	0	...	...	
Totals.	...	10	bc	...	3878	626.7	18.5	771	...	2	...	Cum. & Str.	
Mean.	NE½N.	1		...	30.353	57.0	51.7	70	59.7	0			

## WEDNESDAY, 5TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bu	...	30.377	51.8	49.3	83	...	0	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 70°, min. 46°5.
4.	NW $\frac{1}{2}$ W.	1	bc	...	30.366	50.0	47.5	83	...	3	...	Cum.	
6.	NW $\frac{1}{2}$ W.	1	bc	...	30.398	49.8	47.5	85	60.0	1	...	Cm.&Str.	
8.	NW $\frac{1}{2}$ W.	1	b	...	30.406	50.8	54.8	71	...	0	...	...	
10.	E.	1	bc	...	30.417	64.3	57.8	65	...	1	...	Cum.	
Noon.	N.E.	1	bc	...	30.418	66.3	58.8	62	...	3	Cir cum.	Cum.	
2.	S.S.E.	1	bc	...	30.376	66.8	59.0	61	...	4	Cir cum.	Cum.	
4.	S.S.E.	3	bc	...	30.358	65.8	57.0	57	...	3	Cir.	Cum.	
6.	S.	2	bc	...	30.356	63.8	56.8	63	61.0	1	...	Cum.	
8.	S $\frac{1}{2}$ E.	1	bc	...	30.361	61.3	56.8	75	...	5	...	Cum.	
10.	S.	1	b	...	30.371	60.0	55.8	75	...	0	...	...	
Midd.	S.S.E.	1	bc	...	30.388	59.8	55.8	76	...	3	...	Cum.	
Totals.	...	14	bc	...	4592	719.5	56.9	856	...	24	Cir cum.	Cum.	
Mean. Variable.	1			...	30.383	59.9	54.7	71	60.5	2			

## THURSDAY, 6TH.

2.	S.	1	bc	...	30.386	59.3	54.8	73	...	2	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 71°, min. 55°.
4.	S.	1	bc	...	30.382	58.8	55.3	79	...	5	...	Cum.	
6.	S.	1	bc	...	30.390	59.3	55.8	79	60.2	9	...	Cum.	
8.	N $\frac{1}{2}$ W.	0	bc	...	30.396	63.8	57.8	67	...	6	...	Cir cum.	
10.	S $\frac{1}{2}$ E.	1	bc	...	30.492	67.8	61.3	66	...	7	Cir cum.	Cum.	
Noon.	S.E.	1	bc	...	30.391	70.8	61.3	55	...	8	...	Cir cum.	
2.	S.S.E.	2	bc	...	30.389	68.8	59.8	56	...	5	Cir.	Cum.	
4.	S $\frac{1}{2}$ E.	3	c	...	30.283	66.3	58.8	62	...	10	...	Cm.&Str.	
6.	S.S.E.	2	c	...	30.292	63.8	57.3	65	60.7	10	...	Cum.	
8.	S $\frac{1}{2}$ E.	1	bc	...	30.287	62.8	57.8	72	...	3	...	Cum.	
10.	S $\frac{1}{2}$ E.	1	c	...	30.293	61.8	57.8	77	...	10	...	Cum.	
Midd.	S $\frac{1}{2}$ E.	1	c	...	30.262	61.8	57.8	77	...	10	...	Cum.	
Totals.	...	15	bc	...	4153	765.1	95.6	828	...	85	Cir cum.	Cir cum. & Cum.	
Mean. Variable.	1			...	30.346	63.8	58.0	69	60.4	7			

## FRIDAY, 7TH.

2.	S $\frac{1}{2}$ W.	5	cy	...	30.191	61.8	57.3	75	...	9	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 67°5, min. 60°0.
4.	S $\frac{1}{2}$ W.	2	c	...	30.172	61.3	58.3	82	...	9	...	Cum.	
6.	S $\frac{1}{2}$ E.	1	c	...	30.111	61.3	58.3	82	60.5	10	...	Cum.	
8.	S $\frac{1}{2}$ E.	2	or	...	30.068	61.8	59.3	85	...	10	...	Cum.	
10.	E.	1	ocr	...	30.019	61.8	59.5	87	...	10	...	Cum.	
Noon.	S.E.	1	ocr	...	29.917	61.8	60.3	91	...	10	...	Cum.	
2.	S.E.	1	ocr	...	29.858	61.3	60.8	97	...	10	...	Cum.	
4.	S.E.	5	ocr	...	29.690	62.3	61.8	97	...	10	...	Cum.	
6.	S $\frac{1}{2}$ W.	2	ocpy	...	29.650	64.8	62.8	88	60.7	10	...	Nimb.	
8.	S $\frac{1}{2}$ E.	4	cyp	...	29.580	63.3	61.8	91	...	9	...	Cum.	
10.	S.E.	2	bcy	...	29.589	64.5	62.8	89	...	3	...	Cm.&Str.	
Midd.	S $\frac{1}{2}$ E.	4	cy	...	29.580	65.6	63.8	93	...	10	...	Cum.	
Totals.	...	30	cyp	...	19425	31.0	6.8	1057	...	110	...	Cum., Str., & Nimb.	
Mean. S $\frac{1}{2}$ E.	3			...	29.869	62.6	60.6	88	60.6	9			

## SATURDAY, 8TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S <sup>1</sup> / <sub>2</sub> E.	4	bcp	...	29.552	64.8	61.8	83	...	9	...	Cum.	At Yokohama. Temperature by self-registering thermometer, max. 75° 5, min. 60° 5.
4.	S <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.513	63.8	60.8	82	...	7	...	Cum.	
6.	S <sup>1</sup> / <sub>2</sub> W.	1	bc	...	29.506	63.3	59.7	78	61.0	8	...	Cum.	
8.	SW <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.501	64.8	60.8	78	...	2	...	Cum.	8 P.M. wind shifted to northwards.
10.	SW <sup>1</sup> / <sub>2</sub> S.	2	bc	...	29.519	65.8	61.8	64	...	3	...	Cum.	
Noon.	SW <sup>1</sup> / <sub>2</sub> S.	3	bc	...	29.526	70.8	62.3	59	...	1	...	Str.	
2.	E.S.E.	2	bcp	...	29.554	69.3	68.5	95	...	7	...	Cm.&Cmst	
4.	E.S.E.	2	bcp	...	29.570	67.8	64.5	82	...	10	...	Cm.&Cmst	
6.	S.	1	bc	...	29.603	67.3	64.3	83	60.5	6	Cir str.	Cum.	
8.	S.	2	bc	...	29.659	65.8	59.8	68	...	5	...	Cum.	
10.	S.	5	bc	...	29.710	62.8	55.3	61	...	3	...	Cum.	
Midd.	S <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.752	61.8	54.8	62	...	3	...	Cum.	
Totals.	...	30	bcp	...	6965	71.1	14.4	895	...	64	Cir str.	Cum. & Cum str.	
Mean.	Variable.	2		...	29.580	65.9	61.2	75	60.7	5			

## SUNDAY, 9TH.

2.	N <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.788	60.8	54.8	67	...	3	Cir.	...	At Yokohama. Temperature by self-registering thermometer, max. 70°, min. 57° 2.
4.	N <sup>1</sup> / <sub>2</sub> E.	4	b	...	29.783	58.8	53.8	71	...	0	...	...	
6.	N <sup>1</sup> / <sub>2</sub> W.	1	bc	...	29.815	61.3	56.8	75	60.2	5	Cir cum.	Str.	
8.	N <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.863	61.8	55.3	64	...	4	Cir cum.	Str.	
10.	E.N.E.	1	bc	...	29.906	65.0	57.8	62	...	2	Cir cum.	...	
Noon.	Calm.	0	bc	...	29.911	68.5	61.3	63	...	6	Str.	Cum.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	1	e	...	29.901	68.3	61.3	64	...	10	...	Cum.	
4.	E.	3	e	...	29.887	65.8	60.3	70	...	10	...	Cum.	
6.	E.	3	e	...	29.894	62.8	58.8	77	63.0	10	...	Cum.	
8.	N.E.	3	ocd	...	29.913	60.8	56.8	77	...	10	...	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> S.	2	ocd	...	29.968	59.3	56.3	82	...	10	...	Cum.	
Midd.	N <sup>1</sup> / <sub>2</sub> W.	4	ocd	...	29.968	55.0	52.8	86	...	10	...	Cum.	
Totals.	...	26	bcpd	...	10627	748.2	86.1	858	...	80	Cir cum.	Cum. & Str.	
Mean.	NE <sup>1</sup> / <sub>2</sub> N.	2		...	29.886	62.4	57.2	71	61.6	7			

## MONDAY, 10TH.

2.	S <sup>1</sup> / <sub>2</sub> W.	2	ocd	...	29.964	54.8	52.8	87	...	10	...	Cum str.	At Yokohama. Temperature by self-registering thermometer, max. 64° 5, min. 52° 7.
4.	S <sup>1</sup> / <sub>2</sub> W.	3	oc	...	29.964	54.8	52.8	87	...	10	...	Cmst.&Nb.	
6.	SW <sup>1</sup> / <sub>2</sub> W.	2	c	...	29.996	54.0	52.5	90	62.0	10	...	Cum.	
8.	S <sup>1</sup> / <sub>2</sub> W.	3	c	...	30.035	55.8	53.3	81	...	10	...	Cum.	
10.	N <sup>1</sup> / <sub>2</sub> W.	3	bc	...	30.040	59.3	54.8	74	...	8	...	Cum.	
Noon.	N <sup>1</sup> / <sub>2</sub> W.	2	bc	...	30.039	60.8	55.8	72	...	7	...	Cum str.	
2.	N.E.	3	bc	...	30.033	62.3	56.8	70	...	9	...	Cum str.	
4.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.026	62.5	57.8	75	...	5	...	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.045	60.3	55.3	71	62.0	4	Cir cum.	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.072	58.8	54.5	75	...	6	...	Cm.&Str.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	30.116	57.3	53.8	78	...	4	...	Cm.&Str.	
Midd.	N.E.	1	bc	...	30.130	55.8	52.8	81	...	3	...	Cm.&Str.	
Totals.	...	32	bc	...	460	96.5	53.0	942	...	86	Cir cum.	Cum., Str., & Cum str.	
Mean.	N.N.E.	3		...	30.038	58.0	54.4	78	62.0	7			

## TUESDAY, 11TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea-Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.E.	1	bc	...	30.128	55.3	52.3	81	...	8	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 69°, min. 53°.  3 P.M., left Yokohama and anchored for the night in Kaneda Bay at 6 P.M.
4.	N. N.E.	1	bc	...	30.138	54.8	51.8	81	...	5	...	Cum.	
6.	S.E.	1	bc	...	30.160	55.8	52.8	81	60.2	6	...	Cum.	
8.	S.W.	1	b	...	30.161	58.3	54.8	78	...	0	...	...	
10.	S.	2	b	...	30.151	62.5	55.8	63	...	0	...	...	
Noon.	S.E.	1	bc	...	30.138	63.3	54.8	57	...	1	...	Cum.	
2.	S.E.	1	bc	...	30.134	65.3	55.8	53	...	1	...	Cum.	
4.	N.E. & S.	2	bc	...	30.121	64.3	54.8	53	...	1	...	Cum.	
6.	N.E. & S.	2	bc	...	30.132	63.8	54.8	55	61.2	1	...	Cum.	
8.	S.E.	1	b	...	30.159	59.8	53.8	66	...	0	...	...	
10.	N.W. & W.	1	b	...	30.174	57.3	52.0	69	...	0	...	...	
Midd.	S.E.	0	b	...	30.184	56.0	51.8	74	...	0	...	...	
Totals.	...	14	bc	...	1780	116.5	45.3	811	...	23	...	Cum.	
Mean.	N. N.E.	1		...	30.148	59.7	53.8	68	60.7	2	...	Cum.	

## WEDNESDAY, 12TH.

2.	S.E.	2	b	...	30.179	55.8	52.3	78	...	0	...	...	At noon, lat. 35° 13' S., long. 139° 26' E. Temperature by self-registering thermo- meter, max. 68°, min. 53° 7'. 5 A.M., left Kaneda Bay for Kobe.
4.	S.E.	1	b	...	30.168	55.3	51.3	75	...	0	...	...	
6.	S.E.	2	b	...	30.199	55.3	51.8	78	61.0	0	...	...	
8.	S.W.	1	bm	...	30.232	57.8	54.8	81	61.2	0	...	...	
10.	S.W.	1	bc	...	30.231	60.8	57.3	80	63.0	1	...	Cum.	
Noon.	S.W.	1	bm	...	30.220	64.3	57.8	65	64.2	0	...	...	
2.	S.E. & E.	1	bcm	...	30.186	64.3	54.0	52	64.0	1	Cir.	...	
4.	S.E.	3	bcm	...	30.154	65.8	56.8	56	63.2	2	Cir.	...	
6.	S.E. & S.	2	bc	...	30.174	63.3	56.3	63	63.0	6	Str.	Str.	
8.	S.W. & W.	1	bcm	...	30.177	64.8	55.3	53	67.0	3	Cir str.	...	
10.	S.W. & W.	2	bcm	...	30.206	64.8	59.3	70	68.0	9	...	Cum.	Sp. gr. 1.02543.
Midd.	S.W. & W.	2	bc	...	30.201	64.8	59.8	73	68.0	8	Cir cum.	Cum.	
Totals.	...	19	bcm	...	2327	17.1	66.8	824	42.6	50	Cir. & Str.	Cum.	
Mean.	Variable.	2		...	30.194	61.4	55.6	69	63.6	2			

## THURSDAY, 13TH.

2.	S.W. & W.	2	c	...	30.165	64.3	58.8	70	68.0	10	...	Cum.	At noon, lat. 34° 29' S., long. 137° 47' E. Temperature by self-registering thermo- meter, max. 68°, min. 58°.
4.	S.W.	4	bc	...	30.165	64.8	58.3	65	68.0	9	...	Cum.	
6.	S.E.	2	bc	...	30.158	64.3	58.3	67	68.2	9	...	Cum. & Str.	
8.	S.E.	3	bc	...	30.169	64.8	58.8	68	66.0	8	Cir cum.	Str.	
10.	S.E.	3	bc	...	30.180	66.8	59.8	64	64.0	8	Cir cum.	Str.	
Noon.	S.W.	3	bc	...	30.047	66.3	59.3	64	65.0	8	Cir.	Cum. & Str.	
2.	S.E.	3	bc	...	30.036	65.8	58.8	64	65.0	9	...	Cum.	
4.	S.E.	5	bc	...	29.959	65.8	58.8	64	65.5	9	...	Cum.	
6.	S.E.	5	bc	...	29.873	64.8	60.8	78	66.0	10	...	Str.	
8.	S.E. & E.	7	oc	...	29.853	63.8	60.8	82	66.5	10	...	Str.	Sp. gr. 1.02539.
10.	S.E.	5	ocqr	...	29.790	63.8	61.8	88	66.5	10	...	Str.	
Midd.	S.W. & W.	8	ocqr	...	29.762	63.5	62.8	96	67.5	10	...	Str.	
Totals.	...	59	bc & ocqr	...	101	58.8	117.1	870	76.2	119	Cir cum.	Cum. & Str.	
Mean.	S.	4		...	30.008	64.9	59.8	72	66.4	9			

## FRIDAY, 14TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer, at surface, and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.e.	7	oqrm	4	29.653	64.3	63.3	94	67.5	10	...	Str.	At noon, lat. 33° 22' S. long. 135° 54' E. Temperature by self-registering thermometer, max. 75° 5, min. 61° 0.
4.	s.w.	7	orm	4	29.557	65.3	64.8	97	67.5	10	...	Str.	
6.	s.w.½w.	6	odm	4	29.513	66.8	66.8	100	67.0	10	...	Str.	
8.	N.W.½W.	1	be	...	29.544	65.8	64.8	94	67.0	7	Cir.	Cm.&Cmstr.	
10.	N.W.½N.	2	be	...	29.614	67.8	61.3	68	67.0	5	Cir.	Cm.&Str.	
Noon.	W.½N.	5	beq	4	29.644	67.8	61.8	68	67.5	4	Cir.	Cm.&Str.	
2.	W.½N.	5	beq	3	29.645	71.8	61.8	54	67.0	5	Cir.	Cm.&Str.	
4.	N.N.E.	2	be	...	29.648	74.5	60.5	43	67.5	3	Cir.	Cum.	
6.	N.N.E.	2	be	...	29.683	72.8	59.3	43	67.0	2	...	Cum.	
8.	N.N.E.	2	b	...	29.738	69.8	58.8	50	...	0	...	...	
10.	Calm.	0	be	...	29.789	66.8	58.3	58	...	1	Str.	...	3 P.M., anchored in Oosima Harbour.
Midt.	Calm.	0	b	...	29.794	65.3	55.8	53	...	0	...	...	
Totals.	...	39	oqrm & be	19	78.22	98.8	17.3	82.0	72.0	57	Cir.	Str. & Cum.	
Mean.	Variable.	3		4	29.652	68.2	61.4	68	67.2	5			

## SATURDAY, 15TH.

2.	Calm.	0	be	...	29.741	62.8	56.8	67	...	1	Cir.	...	At noon, lat. 33° 56' S. long. 135° 2' E. Temperature by self-registering thermometer, max. 68° 5, min. 60° 5. 5 A.M., left Oosima Harbour.
4.	Calm.	0	be	...	29.743	61.8	54.8	62	...	1	Cir.	...	
6.	N.W.	1	be	...	29.743	63.3	55.8	61	66.5	3	Cir.	Cum.	
8.	Variable.	2	be	...	29.779	66.0	59.8	67	65.5	8	Cir str.	...	
10.	N.W.½N.	1	be	...	29.807	66.8	60.5	67	64.5	8	Cir str.	Cum.	
Noon.	N.W.½.	4	be	...	29.800	65.3	61.3	78	62.7	7	Cir str.	Cum.	
2.	N.W.½.	2	be	...	29.783	66.8	61.3	70	61.5	8	Cir str.	Cum.	
4.	N.	1	be	...	29.753	67.8	62.3	70	61.5	8	Cir str.	Cum.	
6.	Calm.	0	be	...	29.750	66.8	59.8	64	64.5	8	Cir str.	Cum.	
8.	W.½S.	1	be	...	29.747	65.3	58.8	65	...	8	Cir.	Cum.	
10.	s.e.	0	be	...	29.809	64.0	58.5	69	...	5	Cir str.	...	Sp. gr. 1.02460. 5 P.M., anchored at Kobe.
Midt.	Variable.	1	be	...	29.828	62.8	58.5	76	...	6	Cir str.	...	
Totals.	...	13	be	...	92.83	59.5	108.2	96	26.7	71	Cir str.	Cum.	
Mean.	Variable.	1		...	29.774	65.0	59.0	68	63.8	6			

## SUNDAY, 16TH.

2.	Calm.	0	be	...	29.835	61.3	57.8	80	...	6	Cir str.	...	At Kobe. Temperature by self-registering thermometer, max. 73° 5, min. 58° 2.
4.	Calm.	0	be	...	29.821	60.8	57.8	82	...	2	Cir str.	...	
6.	...	...	...	...	29.829	60.8	58.8	88	59.0	...	...	...	
8.	Calm.	0	be	...	29.832	65.8	61.3	75	...	6	Cir str.	Cum.	
10.	Calm.	0	be	...	29.836	65.8	61.3	75	...	7	Cir.	Cum.	
Noon.	s.e.	1	be	...	29.820	71.2	63.2	61	...	7	Cir.	Cum.	
2.	s.w.½w.	1	...	...	29.792	71.5	62.8	59	...	7	Cir cum.	Cum.	
4.	Calm.	0	be	...	29.780	71.8	60.8	51	...	7	...	Cum.	
6.	Calm.	0	e	...	29.793	70.8	59.8	50	64.2	9	...	Cum.	
8.	Calm.	0	e	...	29.809	66.8	59.8	64	...	10	Cir str.	Cum.	
10.	Calm.	0	b	...	29.839	64.8	58.8	68	...	0	...	...	
Midt.	W.½S.	1	b	...	29.851	63.8	59.8	77	...	0	...	...	
Totals.	...	3	be	...	98.88	75.3	2.1	83.0	123.2	54	Cir str.	Cum.	
Mean.	Calm.	0		...	29.820	66.3	60.2	69	61.6	5			

## MONDAY, 17TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.855	63.3	59.3	77	...	6	Cir.	Cum.	At Kobe. Temperature by self-registering thermo- meter, max. 73°·5, min. 61°·5.
4.	E.	0	c	...	29.862	62.8	59.8	82	...	9	...	Str. & Cum.	
6.	Calm.	0	c	...	29.882	62.8	60.3	85	61.0	10	...	Cum.	
8.	Calm.	0	bc	...	29.917	65.3	61.3	78	...	6	Cir cum.	...	
10.	Variable.	1	bc	...	29.901	68.3	63.8	75	...	3	Cir str.	...	
Noon.	Variable.	1	bc	...	29.875	71.3	64.8	67	...	3	Cir str.	...	
2.	sws.	1	bc	...	29.867	71.8	65.0	66	...	5	Cir str.	Cum.	
4.	sws.	1	bc	...	29.852	70.8	65.8	73	...	3	Cir str.	...	
6.	ws & s.	1	bc	...	29.865	70.3	64.8	71	63.7	3	Cir str.	...	
8.	ws & s.	1	h	...	29.885	67.3	62.8	75	...	0	...	...	
10.	Calm.	0	b	...	29.903	65.8	62.5	82	...	0	...	...	
Midt.	Calm.	0	b	...	29.901	63.3	62.0	82	...	0	...	...	
Totals.	...	6	bc	...	10568	83.1	32.2	913	4.7	48	Cir str.	Cum.	
Mean.	Variable.	1		...	29.881	66.9	62.7	76	62.3	4			

## TUESDAY, 18TH.

2.	Calm.	0	b	...	29.923	61.8	58.8	82	...	0	...	...	At Kober. Temperature by self-registering thermo- meter, max. 80°·5, min. 58°·0.
4.	Calm.	0	b	...	29.969	60.8	57.8	82	...	0	...	...	
6.	Calm.	0	bc	...	29.962	60.5	57.3	81	61.2	3	Cir str.	...	
8.	Calm.	0	bc	...	29.980	64.3	59.8	75	...	4	Cir str.	...	
10.	Calm.	0	bcm	...	29.995	67.3	60.8	66	...	1	Cir.	...	
Noon.	s.	1	bcm	...	29.981	68.8	61.8	64	...	0	...	...	
2.	s.e.	1	bcm	...	29.936	76.3	63.0	45	...	0	...	...	
4.	sw's.	1	bcm	...	29.965	76.8	60.8	38	...	0	...	...	
6.	sw's.	1	bcm	...	29.914	75.3	62.8	48	64.0	3	Cir str.	...	
8.	Calm.	0	bcm	...	29.962	69.8	60.5	56	...	2	Cir str.	...	
10.	Calm.	0	bcm	...	29.990	68.8	62.3	66	...	5	Cir str.	...	
Midt.	Variable.	1	bcm	...	29.989	67.3	60.8	66	...	6	Cir str.	...	
Totals.	...	5	bcm	...	11451	97.8	6.5	769	5.2	24	Cir str.	...	
Mean.	sw.	0		...	29.954	68.1	60.5	64	62.6	2			

## WEDNESDAY, 19TH.

2.	Calm.	0	cc	...	29.957	70.8	58.8	47	...	10	...	Cum.	At Kober. Temperature by self-registering thermo- meter, max. 70°·2, min. 62°·5.
4.	E.N.E.	1	bc	...	29.959	64.8	60.0	74	...	6	...	Cm.&Str.	
6.	Calm.	0	bc	...	29.965	64.8	59.8	73	62.0	4	...	Cum.	
8.	E.N.E.	1	c	...	29.986	65.8	60.8	73	...	10	...	Cm.&Str.	
10.	E.	1	c	...	29.975	67.8	62.3	70	...	10	...	Cm.&Str.	
Noon.	E.	1	c	...	29.954	70.8	64.8	69	...	10	...	Cum.	
2.	Calm.	0	c	...	29.927	72.3	65.3	65	...	10	...	Cum.	
4.	sws.	1	c	...	29.922	70.8	64.3	67	...	10	...	Cum.	
6.	swsw.	2	c	...	29.915	68.8	63.3	70	63.2	10	...	Cum.	
8.	swsw.	3	c	...	29.915	66.5	61.8	74	...	10	...	Cum.	
10.	Calm.	0	cm	...	29.912	65.8	59.8	68	...	10	...	Cm.&Str.	
Midt.	sws.	1	cpd	...	29.910	64.8	60.8	78	...	10	...	Cum.	
Totals.	...	11	bcpd	...	11297	93.8	21.8	828	...	110	...	Cum & Str.	
Mean.	Variable.	1		...	29.941	67.8	61.8	69	62.6	9			

## THURSDAY, 20TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. at 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw by s.	1	oc	...	29.891	64.3	61.3	82	...	10	...	Cum.	At Kobé. Temperature by self-registering thermo- meter, max. 73°·5, min. 60°·7.
4.	Calm.	0	oc	...	29.875	62.3	59.8	85	...	10	...	Cum.	
6.	Calm.	0	c	...	29.878	61.8	59.8	88	61.2	10	...	Cum.	
8.	E. by N.	1	be	...	29.858	63.8	61.0	83	...	6	...	Cum.	
10.	E. S. E.	1	be	...	29.851	65.5	62.3	82	...	6	...	Cum str.	
Noon.	S. E.	1	be	...	29.849	68.8	64.3	75	...	6	...	Cum.	
2.	sw by s.	0	be	...	29.820	71.3	64.8	67	...	2	...	Cir.	
4.	sw by s.	1	be	...	29.800	71.0	65.0	69	...	2	...	Cir.	
6.	w by s.	0	be	...	29.790	71.3	64.8	67	63.2	3	...	Cir.	
8.	N.	1	be	...	29.814	67.8	63.8	78	...	4	...	Cir str.	
10.	Calm.	0	b	...	29.869	66.8	61.8	73	...	0	...	...	
Milt.	Calm.	0	be	...	29.887	65.8	62.8	83	...	2	...	Cm. & Str.	
Totals.	...	6	bcm	...	10182	80.5	31.5	932	4.4	61	...	...	
Mean.	Variable.	1		...	29.848	66.7	62.6	78	62.2	5	Cir.	Cum.	

## FRIDAY, 21st.

2.	Calm.	0	be	...	29.900	64.8	61.8	83	...	1	Cir.	...	At Kobé. Temperature by self-registering thermo- meter, max. 76°, min. 61°·5.
4.	Calm.	0	b	...	29.902	62.8	60.8	88	...	0	...	...	
6.	Calm.	0	b	...	29.940	62.8	60.8	88	64.0	0	...	...	
8.	E.	1	be	...	29.972	65.3	62.8	85	...	1	...	Cum.	
10.	S. S. W.	1	be	...	29.983	67.3	64.3	83	...	1	...	Cum.	
Noon.	SSW by W.	1	b	...	29.992	71.8	66.3	71	...	0	...	...	
2.	SSW by W.	1	be	...	29.961	73.3	65.5	63	...	2	...	Cir.	
4.	SSW by W.	1	be	...	29.953	74.5	66.0	60	...	4	...	Cir.	
6.	sw by s.	1	be	...	29.987	71.3	66.8	76	66.0	7	...	Cum.	
8.	w by s.	1	be	...	29.987	69.3	65.8	80	...	2	...	Cum.	
10.	NW by W.	1	b	...	30.011	68.5	64.3	77	...	0	...	...	
Milt.	NW by W.	1	b	...	30.019	67.8	64.5	82	...	0	...	...	
Totals.	...	9	bc	...	11607	99.5	49.7	936	...	18	...	...	
Mean.	Variable.	1		...	29.967	68.3	64.1	78	65.0	1	Cir.	Cum.	

## SATURDAY, 22d.

2.	Calm.	0	be	...	30.020	66.8	63.8	83	...	2	Cir.	Cum.	At Kobé. Temperature by self-registering thermo- meter, max. 76°, min. 64°·5.
4.	Calm.	0	be	...	30.026	66.3	62.8	81	...	6	...	Cum.	
6.	E.	1	be	...	30.051	65.8	62.8	83	63.2	5	...	Cum.	
8.	N. N. E.	0	be	...	30.071	67.8	64.8	83	...	5	...	Cum.	
10.	sw by s.	2	be	...	30.074	70.3	66.3	78	...	3	...	Str.	
Noon.	sw by s.	2	be	...	30.069	72.8	66.8	70	...	5	...	Cum.	
2.	sw by s.	1	be	...	30.049	73.8	67.8	70	...	2	...	Str.	
4.	sw by s.	1	be	...	30.037	72.8	66.8	70	...	6	...	Cir.	
6.	sw by s.	2	be	...	30.038	71.8	65.8	69	67.0	4	...	Cum.	
8.	w by s.	1	be	...	30.038	69.8	65.8	78	...	5	...	Cum.	
10.	w by s.	1	be	...	30.054	68.8	64.8	78	...	3	...	Cum.	
Milt.	Calm.	0	be	...	30.060	68.3	64.3	78	...	2	...	Cum.	
Totals.	...	11	bc	...	587	115.1	62.6	921	10.2	48	...	...	
Mean.	Variable.	1		...	30.049	69.6	65.2	77	65.1	4	Cir & Str.	Cum.	

SUNDAY, 23<sup>d</sup> MAY 1875.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.032	65.8	63.3	81	...	2	...	Cum.	At Kobe. Temperature by self-registering thermo- meter, max. 72°, min. 64°.
4.	S.E.	1	c	...	30.023	65.8	63.3	85	...	9	...	Cum.	
6.	E.	3	c	...	29.982	66.3	63.3	83	63.0	10	Str.	Cum.	
8.	E.	3	c	...	29.971	67.8	64.3	80	...	10	...	Cm.&Str.	
10.	E.	2	bc	...	29.942	70.8	65.3	71	...	9	...	Cm.&Str.	
Noon.	N.N.E.	1	c	...	29.932	70.3	64.8	71	...	9	...	Cm.&Str.	
2.	N.N.E.	2	or	...	29.877	69.8	65.8	78	...	10	...	Cm.&Nb.	
4.	E.N.E.	1	orm	...	29.832	67.8	65.3	85	...	10	...	Nimb.	
6.	E.N.E.	4	orm	...	29.750	65.8	63.8	88	62.0	10	...	Nimb.	
8.	E.N.E.	5	or	...	29.663	64.8	62.8	88	...	10	...	Nimb.	
10.	E.N.E.	3	cd	...	29.647	65.8	62.8	83	...	10	...	Nimb.	
Midt.	N.W.	1	cr	...	29.627	65.3	63.3	88	...	10	...	Cum.	
Totals.	...	26	...	...	10258	87.1	48.1	21	...	109	...	Cum., Str., & Nimb.	
Mean.	NE <sup>1</sup> E.	2	...	...	29.855	67.3	64.0	82	62.5	9	...	...	

MONDAY, 24<sup>TH</sup>.

2.	sw <sup>1</sup> w.	1	omd	...	29.643	64.3	62.8	91	...	10	...	Cm.&Nb.	At Kobe. Temperature by self-registering thermo- meter, max. 74° 5', min. 63° 0'.
4.	sw <sup>1</sup> w.	1	c	...	29.670	64.3	63.3	94	...	9	...	Cum.	
6.	sw <sup>1</sup> w.	1	bey	...	29.682	64.8	63.3	91	67.0	9	Cir.	Cm.&Str.	
8.	sw <sup>1</sup> s.	1	bc	...	29.702	66.8	65.3	91	...	8	...	Cm.&Nb.	
10.	sw <sup>1</sup> w.	1	bc	...	29.693	68.8	64.3	75	...	8	...	Cum.	
Noon.	sw <sup>1</sup> w.	2	bc	...	29.687	71.3	66.8	75	...	8	...	Cum.	
2.	sw <sup>1</sup> s.	2	bc	...	29.647	72.8	65.8	66	...	4	Cir cum.	...	
4.	w <sup>1</sup> s.	3	bc	...	29.654	72.8	61.8	51	...	5	Cir.	Cum.	
6.	xxw <sup>1</sup> w.	3	bc	...	29.687	70.8	62.8	61	61.0	5	...	Cum.	
8.	N.	1	bep	...	29.723	68.8	62.3	66	...	7	...	Cum.	
10.	Calm.	0	b	...	29.806	64.8	60.8	78	...	0	...	...	
Midt.	w <sup>1</sup> s.	1	bc	...	29.849	63.3	58.8	75	...	1	...	Cum.	
Totals.	...	17	...	...	8437	93.6	38.1	914	...	74	...	Cir.	Cum. & Nimb.
Mean.	Variable.	1	...	...	29.703	67.8	63.2	76	64.0	6	...	...	

TUESDAY, 25<sup>TH</sup>.

2.	w <sup>1</sup> s.	1	bc	...	29.856	61.8	57.8	77	...	1	...	Cum.	At noon, lat. 34° 37' N. long. 135° 4' E. Temperature by self-registering thermo- meter, max. 73°, min. 58°. 10 A.M., left Kobe.
4.	w <sup>1</sup> s.	1	c	...	29.881	60.8	56.8	77	...	0	...	...	
6.	sw <sup>1</sup> s.	1	bem	...	29.950	60.3	57.3	82	60.5	3	...	Cm.&Str.	
8.	sw <sup>1</sup> w.	1	bc	...	30.001	64.5	59.8	74	...	2	Cir.	Cum.	
10.	S.S.E.	1	bc	...	30.000	68.3	63.3	73	63.5	2	Cir.	Cum.	
Noon.	sw.	2	bc	...	30.007	66.8	62.3	75	63.0	4	Cir.	Cum.	
2.	Calm.	0	bc	...	30.004	69.8	64.3	71	64.5	5	Cir str.	Cum.	
4.	str <sup>1</sup> E.	1	bc	...	29.995	71.3	66.3	73	65.5	3	Cir str.	...	
6.	str <sup>1</sup> E.	1	bc	...	29.975	71.3	66.3	73	65.5	4	Cir str.	Cum.	
8.	Calm.	0	bc	...	29.994	66.8	61.8	73	...	3	Cir str.	Cum.	
10.	Calm.	0	b	...	30.003	65.8	60.5	72	...	0	...	...	7 P.M., anchored off Sakate.
Midt.	Calm.	0	bc	...	30.011	63.8	60.8	82	...	2	Cir.	...	
Totals.	...	9	...	...	11689	71.3	17.3	902	22.5	29	...	Cir str.	Cum.
Mean.	S.S.W.	1	...	...	29.973	65.9	61.4	75	63.8	2	...	...	

WEDNESDAY, 26TH MAY 1875.

Hour.	Wind.		Weather	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.006	62.8	58.8	77	...	0	...	...	At noon, lat. 34° 17' N. long. 133° 33' E. Temperature by self-registering thermo- meter, max. 77° 5, min. 60° 7. Left Sakate.
4.	Calm.	0	b	...	29.998	62.8	59.8	82	...	0	...	...	
6.	Calm.	0	b	...	30.011	63.3	61.8	80	65.2	0	...	...	
8.	Calm.	0	bc	...	30.058	65.3	61.8	80	62.5	4	Cir str.	...	Sp. gr. 1.02340. Anchored at Miwara.
10.	sw ½ s.	1	bc	...	30.057	68.8	63.8	73	63.8	6	Cir str.	...	
Noon.	sw ½ s.	1	bc	...	30.045	71.8	66.8	74	66.3	5	Cir.	Str.	
2.	sw ½ s.	1	bc	...	30.020	74.5	67.5	66	66.8	5	Cir.	Str.	
4.	sw ½ s.	3	bc	...	30.005	73.8	63.8	55	67.8	5	Cir.	Str.	
6.	sw ½ s.	2	bc	...	29.993	72.3	62.8	56	65.8	4	Str.	Cum.	
8.	Calm.	0	bc	...	30.000	69.3	63.8	71	...	2	Cir.	Cum.	
10.	w ½ s.	1	bc	...	30.043	66.8	61.8	73	...	2	...	Str.	
Midt.	sw ½ w.	1	b	...	30.045	62.8	60.3	85	...	0	...	...	
Totals.	...	10	bc	...	281	94.3	30.8	872	38.2	33	Cir str.	Cum. & Str.	
Mean.	sw ½ w.	1		...	30.023	67.9	62.6	73	65.5	3			

THURSDAY, 27TH.

2.	Calm.	0	b	...	30.043	63.0	59.8	81	...	1	Cir.	...	At Miwara. Temperature by self-registering thermo- meter, max. 70°, min. 60° 5.
4.	sw ½ w.	1	bc	...	30.029	62.5	59.8	83	...	8	...	Cum. & Str.	
6.	Variable.	1	bc	...	30.047	62.3	60.3	88	64.0	8	...	Cum.	
8.	Calm.	0	bc	...	30.049	64.3	61.8	85	...	9	...	Cum.	Sp. gr. 1.02384. 4 P.M., anchored off Hiro Sima.
10.	E. S. E.	1	bc	...	30.043	66.8	63.3	80	...	9	...	Cum.	
Noon.	E. S. E.	3	bc	...	30.024	68.3	64.8	80	...	8	...	Cum. & Str.	
2.	SE ½ E.	2	bc	...	29.986	67.8	63.8	78	...	9	...	Cum. & Str.	
4.	S. E.	2	bc	...	29.972	69.8	64.8	73	...	8	...	Cum. & Str.	
6.	S.	1	cd	...	29.969	68.8	65.3	80	63.2	10	...	Cum.	
8.	Calm.	0	orm	...	29.983	67.8	64.8	83	...	10	...	Cum.	
10.	Calm.	0	orm	...	29.987	67.3	65.8	91	...	10	...	Str.	
Midt.	Calm.	0	orm	...	29.973	66.3	64.8	91	...	10	...	Str.	
Totals.	...	11	bc & orm	...	105	75.0	39.1	33	...	100	Cir.	Cum. & Str.	
Mean.	Variable.	1		...	30.009	66.2	63.3	83	63.6	8			

FRIDAY, 28TH.

2.	Calm.	0	opm	...	29.907	65.8	64.3	91	...	10	...	Str.	At noon, lat. 34° 18' N. long. 133° 21' E. Temperature by self-registering thermo- meter, max. 70°, min. 64° 2. 9 A.M., left Miwara.
4.	Calm.	0	opm	...	29.873	64.8	63.8	94	...	10	...	Str.	
6.	Calm.	0	cm	...	29.827	65.3	64.3	94	62.5	10	...	Str.	
8.	Calm.	0	e	...	29.814	65.8	64.8	94	...	10	...	Str.	Sp. gr. 1.02384. 4 P.M., anchored off Hiro Sima.
10.	Calm.	0	cm	...	29.776	67.8	66.0	89	64.2	10	Cir str.	Str.	
Noon.	E. S. E.	1	bcm	...	29.727	69.0	67.0	88	66.7	9	...	Cum. & Str.	
2.	NE ½ N.	2	crm	...	29.695	68.8	66.8	88	67.2	10	...	Str.	
4.	S.	1	crm	...	29.658	66.8	65.8	94	...	10	...	Cum. & Str.	
6.	Calm.	0	bcq	...	29.657	67.8	66.8	94	64.5	8	...	Cum. & Str.	
8.	Calm.	0	cm	...	29.589	67.3	66.0	93	...	10	...	Cum.	
10.	Calm.	0	bcp	...	29.563	67.0	65.8	93	...	9	...	Cum.	
Midt.	w.	1	e	...	29.516	67.8	66.8	94	...	9	...	Cum.	
Totals.	...	5	eqmp	...	8602	84.0	68.2	26	25.1	115	Cir str.	Cum. & Str.	
Mean.	Variable.	1		...	29.717	67.0	65.7	92	65.0	10			

## SATURDAY, 29TH MAY 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer Reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 6 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	S.	2	ctg	...	29.486	68.8	67.8	91	...	10	...	Cum. & Nl.	At noon, lat. 31° 26' N. long. 134° 23' E. Temperature by self-registering thermo- meter, max. 70.5, min. 64.5. 8 a.m., left Hiro Sima. Sp. gr. 1.02357. 5 p.m., anchored at Kōbē.
4.	S.	4	cirr	...	29.440	68.8	67.8	94	...	10	...	Cum.	
6.	W.S.	6	ocyp	...	29.467	67.3	66.8	97	...	10	...	Nimb.	
8.	S.W.	4	bepp	...	29.526	66.8	63.8	83	...	8	...	Cum. & Str.	
10.	W.	4	bc	...	29.560	67.0	62.8	77	63.0	8	...	Cum. & Str.	
Noon.	W.S.W.	3	bc	...	29.582	66.8	63.5	77	63.0	5	...	Cum. & Str.	
2.	NW.S.	3	bc	...	29.608	68.8	63.5	72	63.5	4	...	Cir.	
4.	NW.S.	4	bc	...	29.628	70.3	63.3	65	63.5	4	...	Cir.	
6.	SW.S.W.	3	bc	...	29.695	68.0	60.3	61	67.0	4	...	Cir.	
8.	N.W.	4	bc	...	29.737	62.8	56.8	67	...	5	...	Cir str.	
10.	N.E.	0	bq	...	29.787	60.3	54.8	69	...	0	...	...	
Midt.	N.N.E.	3	bq	...	29.797	59.8	54.8	71	...	2	...	Cum.	
Totals.	...	40	...	...	7313	75.5	26.0	927	20.0	70	...	Cum., Str., & Nimb.	
Mean.	N.S.W.	3	bepp	...	29.609	66.3	62.2	77	64.0	6	...	Cir.	

## SUNDAY, 30TH.

2.	NW.S.W.	3	bc	...	29.796	58.3	54.3	76	...	2	...	Cir emu.	At Kōbē. Temperature by self-registering thermo- meter, max. 70°, min. 55°.
4.	NW.S.W.	2	bc	...	29.803	57.8	53.8	76	...	3	...	Str.	
6.	N.W.	1	bc	...	29.820	57.8	54.3	78	65.2	2	...	Cum. & Str.	
8.	Calm.	0	c	...	29.856	60.8	56.3	71	...	10	...	Cum. & Str.	
10.	S.W.	1	bem	...	29.874	63.8	58.8	72	...	9	...	Cum. & Str.	
Noon.	S.W.	0	bem	...	29.861	64.8	57.8	63	...	9	...	Str.	
2.	SW.S.	1	bem	...	29.849	66.8	57.5	52	...	9	...	Cir str.	
4.	SW.S.	1	bem	...	29.849	67.8	59.3	58	...	7	...	Cir str.	
6.	SW.S.	1	bc	...	29.850	67.8	60.8	64	67.2	8	...	Cir str.	
8.	W.S.	1	bc	...	29.860	64.8	59.8	73	...	6	...	Cir str.	
10.	Calm.	0	bem	...	29.897	61.8	57.8	77	...	3	...	Str.	
Midt.	Calm.	0	bem	...	29.906	60.8	57.0	78	...	1	...	Str.	
Totals.	...	11	...	...	10221	33.1	87.5	841	...	69	...	Cir str.	Cum. & Str.
Mean.	W.S.W.	1	bem	...	29.852	62.8	57.3	70	66.2	6	...	Cir str.	

## MONDAY, 31ST.

2.	Calm.	0	bem	...	29.912	59.0	55.8	81	...	1	...	Str.	At Kōbē. Temperature by self-registering thermo- meter, max. 79.°, min. 58°.
4.	Calm.	0	bem	...	29.910	58.8	55.5	80	...	3	...	Cir.	
6.	Calm.	0	bem	...	29.932	59.3	56.3	82	65.2	6	...	Cum. & Str.	
8.	Calm.	0	bc	...	29.937	63.8	59.8	77	...	7	...	Cir emu.	
10.	S.	1	bc	...	29.934	67.8	61.8	68	...	7	...	Cir str.	
Noon.	S.W.	2	bc	...	29.921	70.8	63.8	65	...	8	...	Cir str.	
2.	S.W.	2	bc	...	29.867	75.3	64.3	52	...	9	...	Cir str.	
4.	S.W.	1	bc	...	29.852	77.3	66.8	55	...	8	...	Cir str.	
6.	SW.S.	1	bc	...	29.861	73.3	64.8	69	67.7	6	...	Cir str.	
8.	W.S.	0	bc	...	29.880	68.3	61.8	66	...	4	...	Cum. & Str.	
10.	W.S.	1	bc	...	29.907	65.8	60.3	70	...	3	...	Str.	
Midt.	Calm.	0	bc	...	29.900	64.8	59.8	73	...	2	...	Str.	
Totals.	...	8	...	...	10513	89.3	10.8	829	12.9	64	...	Cir str.	Cum. & Str.
Mean.	S.W.	1	bem	...	29.901	67.0	60.9	69	66.4	5	...	Cir str.	

TUESDAY, 1st JUNE 1875.

Hour.	Wind.		Weather.	State of Sea.	State of Sky.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity.	Sat. temp.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.					Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	Calm.	0	bcm	...	...	29.886	63.3	58.8	75	...	9	...	Cum. & Str.	...	At Kobe. Temperature by self-registering thermometer, max. 74° 5, min. 60° 7.
4.	Calm.	0	bcm	...	...	29.873	61.8	58.3	80	...	6	...	Str.	...	
6.	Calm.	0	bcm	...	...	29.899	62.3	59.5	83	65.5	6	...	Str.	...	
8.	E.	1	bcm	...	...	29.918	64.3	60.3	77	...	8	...	Str.	...	
10.	S.S.E.	1	bcm	...	...	29.913	67.8	63.3	76	...	3	Cir str.	...	...	
Noon.	S.S.E.	1	be	...	...	29.907	70.8	65.3	71	...	2	Cir str.	...	...	
2.	S.S.E.	1	be	...	...	29.880	71.8	64.8	65	...	4	Cir str.	...	...	
4.	S.S.E.	1	be	...	...	29.858	72.8	64.0	59	...	2	Cir str.	Cum.	...	
6.	S.S.E.	1	be	...	...	29.843	72.8	65.8	66	67.5	3	Cir str.	Cum.	...	
8.	Calm.	0	b	...	...	29.867	71.0	65.5	71	...	0	...	...	...	
10.	Calm.	0	b	...	...	29.890	67.8	62.3	70	...	0	...	...	...	
Midt.	Calm.	0	b	...	...	29.907	65.8	60.8	73	...	0	...	...	...	
Totals.	...	6	...	...	...	10641	92.3	28.7	866	...	43	...	...	...	Cir str. Cum. & Str.
Mean.	S.E.	1	bcm	...	...	29.887	67.7	62.4	72	66.5	4	...	...	...	

WEDNESDAY, 2d.

2.	Calm.	0	b	...	...	29.911	64.8	58.8	68	...	0	...	...	...	At noon, lat. 34° 31' N. long. 135° 6' E. Temperature by self-registering thermometer, max. 73° 5, min. 61° 5.  10 A.M., left Kobe for Yokohama.  Sp. gr. 1.02450.
4.	Calm.	0	b	...	...	29.921	63.8	58.8	72	...	0	...	...	...	
6.	S.S.E.	1	be	...	...	29.951	61.8	58.3	80	65.0	4	Str.	Cir cum.	...	
8.	S.S.E.	1	be	...	...	29.957	67.0	62.3	75	...	4	Cir.	Str.	...	
10.	Calm.	0	be	...	...	29.950	71.5	65.3	68	...	5	Cir.	Str.	...	
Noon.	sw by s.	2	be	...	...	29.943	72.5	65.0	63	70.5	4	Cir str.	Cir cum.	...	
2.	sw by w.	2	bcm	...	...	29.918	70.3	64.8	71	65.2	8	...	Cum str.	...	
4.	sw by w.	2	bcm	...	...	29.889	71.3	65.3	69	66.5	8	Cir cum.	...	...	
6.	S.E.	1	bcm	...	...	29.865	70.8	66.0	74	68.5	8	Cir str.	...	...	
8.	S.E.	1	bcm	...	...	29.887	69.8	67.0	84	67.8	8	...	Str.	...	
10.	S.E.	1	bcm	...	...	29.892	71.3	67.3	78	70.5	0	...	...	...	
Midt.	S.	1	bcm	...	...	29.851	71.0	67.3	79	70.5	0	...	...	...	
Totals.	...	11	...	...	...	10935	105.9	46.2	881	544.5	49	...	...	...	Cir str. Cir cum. & Str.
Mean.	S.E.	1	bcm	...	...	29.911	68.8	63.9	73	68.1	4	...	...	...	

THURSDAY, 3d.

2.	S.	3	bcm	...	...	29.813	70.3	66.3	78	69.2	6	...	...	...	At noon, lat. 32° 57' N. long. 136° 13' E. Temperature by self-registering thermometer, max. 70°, min. 67°.  Sp. gr. 1.02550.
4.	S.E.	3	od	...	...	29.767	70.3	66.8	81	69.2	10	...	...	...	
6.	S.S.E.	3	od	...	...	29.751	69.5	66.8	84	69.0	10	...	...	...	
8.	S.S.E.	4	c	...	...	29.706	69.3	66.8	86	69.5	10	...	...	...	
10.	S.E.	4	cpm	...	...	29.628	68.8	67.3	91	69.2	10	...	...	...	
Noon.	S.E.	6	cpm	...	...	29.577	67.8	66.8	94	68.2	10	...	...	...	
2.	S.E.	5	cpm	...	...	29.498	68.5	67.3	93	68.5	10	...	...	...	
4.	S.E.	7	cpm	...	...	29.431	68.8	68.3	97	68.5	10	...	...	...	
6.	S.	2	od	...	...	29.421	69.0	68.8	99	68.5	10	...	...	...	
8.	S.S.W.	2	om	...	...	29.394	69.3	68.8	97	68.7	10	...	...	...	
10.	S.W.	3	om	...	...	29.402	68.8	68.3	97	68.7	10	...	...	...	
Midt.	N.N.E.	3	om	...	...	29.408	68.5	67.8	95	68.7	10	...	...	...	
Totals.	...	46	...	...	...	6796	108.9	20.1	12	105.9	116	...	...	...	Cum. & Str.
Mean, Variable.	...	4	cpm	...	...	29.566	69.1	67.5	91	68.8	10	...	...	...	

## FRIDAY, 4TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level	Thermometer			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	S.E.	3	c	...	29.390	68.0	67.5	97	68.5	9	...	Str.	At noon, lat. 33° 47' N. long. 137° 31' E. Temperature by self-registering thermo- meter, max. 74° 2, min. 65° 0.
4.	S.E.	4	c	...	29.377	68.3	67.3	94	69.0	10	...	Str.	
6.	NE <sup>1</sup> /S.	4	odm	...	29.435	68.3	67.8	97	69.0	10	...	Str.	
8.	N.N.E.	6	om	...	29.488	66.8	65.3	91	68.7	10	...	Cum str.	
10.	N.E.	4	bc	...	29.495	68.3	65.8	85	69.5	7	...	Cm & Cumst	
Noon.	NE <sup>1</sup> /S.	4	c	...	29.516	69.8	66.3	81	69.5	10	...	Cm & Cumst	
2.	N.E.	2	bc	...	29.526	71.3	67.3	78	70.0	6	Cir cum.	Str.	
4.	N.E.	0	bc	...	29.535	72.8	67.8	74	72.7	4	...	Str.	
6.	E.N.E.	1	bc	2	29.583	71.8	66.8	74	75.0	2	...	Cm & Str.	
8.	E.N.E.	2	c	...	29.607	70.8	67.3	81	71.8	10	...	Cm & Str.	
10.	E.N.E.	4	bcq	...	29.643	68.3	65.3	83	70.7	4	...	Cum.	Sp. gr. 1.02560.
Midn.	E.N.E.	6	bcq	...	29.677	67.8	63.8	78	70.0	6	...	Cum.	
Totals.	...	38	odm & bc	...	6272	112.3	78.3	1013	4.4	88	Cir cum.	Cum., Str., & Cum str.	
Mean.	S.E.	3		2	29.523	69.4	66.5	84	70.4	7			

## SATURDAY, 5TH.

2.	E.N.E.	5	bcqm	...	29.725	67.5	62.8	75	70.0	2	...	Cum.	At noon, lat. 34° 51' N. long. 139° 17' E. Temperature by self-registering thermo- meter, max. 67°, min. 63° 5.
4.	E.N.E.	6	bcq	...	29.755	65.8	61.8	78	69.8	4	Cir cum.	Str.	
6.	E.N.E.	5	cm	...	29.810	64.8	61.8	83	69.8	9	...	Cm & Str.	
8.	E.N.E.	6	bc	...	29.818	63.8	60.8	82	69.8	3	Cir.	...	
10.	NE <sup>1</sup> /S.	4	bcq	...	29.846	64.3	61.3	82	69.5	8	...	Cir cum.	
Noon.	NE <sup>1</sup> /S.	1	eq	...	29.864	64.8	61.3	81	67.0	10	...	Cum.	
2.	S.E.	1	cm	...	29.874	65.8	61.8	78	67.0	10	...	Cm & Str.	
4.	Calm.	0	cm	...	29.873	66.8	63.3	80	66.5	10	...	Cm & Str.	
6.	N.N.E.	1	cm	...	29.880	64.8	61.8	83	66.2	10	...	Str.	
8.	S <sup>1</sup> /W.	0	cm	...	29.920	65.3	62.3	83	64.0	10	...	Str.	
10.	S <sup>1</sup> /W.	1	c	...	29.945	64.8	62.3	85	...	10	...	Cm & Str.	9 p.m., anchored at Yokohama.
Midn.	S <sup>1</sup> /W.	0	cl	...	29.968	64.3	62.8	91	...	10	...	Cm & Str.	
Totals.	...	30	eqm	...	10278	62.8	24.1	981	79.6	96	Cir cum.	Cum. & Str.	
Mean.	NE <sup>1</sup> /S.	3		...	29.856	65.2	62.0	82	68.0	8			

## SUNDAY, 6TH.

2.	Calm.	0	cpd	...	29.952	62.8	61.8	94	...	8	...	Cm & Str.	At Yokohama. Temperature by self-registering thermo- meter, max. 73° 5, min. 61° 5.
4.	Calm.	0	cl	...	29.963	63.3	61.8	94	...	10	...	Cm & Str.	
6.	N.N.E.	1	c	...	29.964	62.8	61.3	91	67.0	10	...	Cm & Str.	
8.	S <sup>1</sup> /W.	1	c	...	29.928	63.8	62.5	92	...	10	...	Cm & Str.	
10.	S <sup>1</sup> /W.	1	cm	...	29.927	66.8	64.5	86	...	10	...	Cm & Str.	
Noon.	NE <sup>1</sup> /E.	1	c	...	29.928	69.5	65.8	79	...	10	...	Cm & Cumst	
2.	S.	1	c	...	29.994	70.8	67.3	81	...	10	...	Cm & Str.	
4.	S <sup>1</sup> /S.	2	c	...	29.990	68.8	65.3	80	...	10	...	Cm & Str.	
6.	S <sup>1</sup> /E.	1	c	...	29.976	69.3	64.8	75	68.5	10	...	Cm & Str.	
8.	S.S.E.	1	c	...	29.977	68.8	64.8	78	...	10	...	Cm & Str.	
10.	S <sup>1</sup> /W.	1	c	...	29.972	68.3	64.8	80	...	10	...	Cm & Str.	
Midn.	S <sup>1</sup> /W.	3	bc	...	29.969	68.0	64.5	81	...	7	...	Cum.	
Totals.	...	13	cmpl	...	11831	83.0	49.2	1008	...	115	...	Cum. & Str.	
Mean.	Variable.	1		...	29.986	66.9	64.1	84	67.7	10			

## MONDAY, 7TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw <sup>1</sup> w.	1	b	...	29.947	67.3	64.3	83	...	0	...	...	At Yokohama. Temperature by self-registering thermometer, max. 75°, min. 63° 5.
4.	w <sup>1</sup> s.	1	bc	...	29.934	65.8	62.8	83	...	5	Cir.	...	
6.	sw <sup>1</sup> w.	1	bc	...	29.952	65.8	63.8	88	68.0	6	Cir.	Cir cum.	
8.	Calm.	0	bc	...	29.957	68.5	65.3	82	...	5	Cir.	...	
10.	NE <sup>1</sup> S.	1	bcm	...	29.937	70.3	66.3	78	...	8	Cir str.	Cum.	
Noon.	S. E.	1	bcm	...	29.902	71.8	67.8	79	...	6	Cir.	Cm.&Str.	
2.	sw <sup>1</sup> w.	1	bc	...	29.865	73.8	68.3	72	...	6	Cir.	Cm.&Str.	
4.	sw <sup>1</sup> w.	3	...	...	29.851	73.8	69.3	76	...	...	Cir.	Cm.&Str.	
6.	sw <sup>1</sup> s.	1	bc	...	29.844	73.3	68.8	76	69.0	7	Cir.	Cm.&Str.	
8.	sw <sup>1</sup> s.	1	bcm	...	29.854	70.8	67.8	83	...	3	...	Cm.&Str.	
10.	Calm.	0	bcm	...	29.907	73.3	67.8	72	...	8	...	Cum.	
Midt.	sw <sup>1</sup> w.	1	...	...	29.897	69.8	67.8	88	...	...	...	Cum.	
Totals.	...	12	...	...	10847	4.3	80.1	960	...	54	Cir.	Cum. & Str.	
Mean.	Variable.	1	bcm	...	29.904	70.4	66.7	80	68.5	5	...	...	

## TUESDAY, 8TH.

2.	N <sup>1</sup> W.	1	cm	...	29.895	69.8	67.5	86	...	7	...	Cum.	At Yokohama. Temperature by self-registering thermometer, max. 71°, min. 65° 7.
4.	N <sup>1</sup> W.	1	cut	...	29.908	68.8	66.5	86	...	9	...	Cm.&Str.	
6.	N. N. E.	2	c	...	29.947	67.8	64.8	83	68.5	10	...	Cm.&Str.	
8.	N. E.	2	c	...	29.967	66.8	61.8	73	...	10	...	Cm.&Str.	
10.	N. E.	3	c	...	29.994	67.8	61.8	68	...	10	...	Cm.&Str.	
Noon.	N. E.	3	c	...	29.994	67.8	61.3	66	...	10	...	Cm.&Str.	
2.	N. E.	2	c	...	29.988	67.8	61.5	67	...	10	...	Cm.&Str.	
4.	N. E.	2	cr	...	29.974	66.8	61.8	73	...	10	...	Str.	
6.	N. N. E.	2	ocd	...	29.963	65.5	62.8	85	...	10	...	Cm.&Str.	
8.	N.	1	ocr	...	29.951	62.8	60.8	88	...	10	...	Str.	
10.	N.	1	or	...	29.926	60.8	59.8	94	...	10	...	Cm.&Str.	
Midt.	N.	3	or	...	...	60.3	59.3	94	...	10	...	Cm.&Str.	
Totals.	...	23	...	...	10517	72.8	29.7	963	...	116	...	Cum. & Str.	
Mean.	N. N. E.	2	cr	...	29.956	66.1	62.5	80	68.5	10	...	...	

## WEDNESDAY, 9TH.

2.	N <sup>1</sup> W.	3	or	...	29.820	59.8	58.8	91	...	10	...	Cm.&Str.	At Yokohama. Temperature by self-registering thermometer, max. 84°, min. 58°.
4.	N <sup>1</sup> W.	1	or	...	29.798	59.8	58.8	94	...	10	...	Cm.&Str.	
6.	N. E.	1	or	...	29.722	60.8	59.8	94	67.7	10	...	Cm.&Str.	
8.	Calm.	0	or	...	29.660	61.8	60.8	94	...	10	...	Cm.&Str.	
10.	sw <sup>1</sup> w.	4	cyp	...	29.607	72.8	70.8	89	...	10	...	Cum.	
Noon.	sw <sup>1</sup> w.	6	cq	...	29.558	73.3	71.3	91	...	10	...	Cm.&Str.	
2.	sw <sup>1</sup> w.	5	bcq	...	29.540	77.8	73.3	77	...	10	...	Cm.&Str.	
4.	sw <sup>1</sup> s.	5	bcq	...	29.553	79.8	73.8	71	...	7	Cir str.	...	
6.	sw <sup>1</sup> w.	7	bc	...	29.559	77.8	71.3	69	68.5	7	Cir.	Cum.	
8.	sw <sup>1</sup> w.	3	bc	...	29.573	73.8	69.8	79	...	5	Cir cum.	...	
10.	sw <sup>1</sup> s.	5	b	...	29.610	73.8	68.8	74	...	0	...	...	
Midt.	sw <sup>1</sup> s.	3	b	...	29.642	72.3	68.3	79	...	0	...	...	
Totals.	...	43	...	...	7642	3.6	86.1	1005	2	89	Cir str.	Cum. & Str.	
Mean.	Variable.	4	or & bcq	...	29.637	70.3	67.2	84	68.1	7	...	...	

THURSDAY, 10TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.710	69.8	67.8	88	...	12	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 76°, min. 66° 2.
4.	xxw by w.	1	bc	...	29.746	68.8	64.8	78	...	4	Cir str.	...	
6.	sw by w.	12	bc	...	29.799	70.3	63.0	64	65.5	8	Cir str.	Cir cum.	
8.	N.E.	1	bc	...	29.847	71.8	65.8	69	...	8	Cir str.	Cum.	
10.	E.	1	bc	...	29.851	74.0	66.8	65	...	8	Cir str.	Cum.	
Noon.	E.	12	bc	...	29.884	74.8	67.5	65	...	8	Cir cum.	Str.	
2.	E.	12	c	...	29.892	73.3	65.8	64	...	10	...	Cm. & Str.	
4.	E.N.E.	1	c	...	29.899	72.8	67.3	72	...	10	...	Cm. & Cum.	
6.	S.E.	1	bc	...	29.927	71.3	66.8	75	69.2	8	Str.	Cum.	
8.	S.E.	1	bc	...	29.956	69.8	65.3	75	...	6	...	Cir cum.	
10.	Calm.	0	bc	...	29.986	68.8	65.0	79	...	4	...	Cir cum.	
Midt.	Calm.	0	bc	...	29.994	68.3	65.5	84	...	5	Cir.	Str.	
Totals.	...	12	bc	...	10491	13.8	71.4	878	14.7	81	Cir cum., Cum., & Str.		
Mean.	E.N.E.	1		...	29.874	71.1	65.9	73	67.3	7			

FRIDAY, 11TH.

2.	Calm.	0	b	...	30.001	67.3	63.8	80	...	0	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 82°, min. 62° 7.
4.	Calm.	0	bc	...	30.097	65.3	62.8	85	...	2	...	Str.	
6.	xxw by w.	1	b	...	30.012	66.3	63.3	83	69.0	0	...	...	
8.	Calm.	0	b	...	30.045	69.8	65.8	78	...	0	...	...	
10.	E.S.E.	1	b	...	30.061	72.0	67.0	74	...	0	...	...	
Noon.	S.E.	1	b	...	30.051	77.8	68.8	59	...	0	...	...	
2.	S.E.	2	b	...	30.041	80.0	68.8	52	...	0	...	...	
4.	S.E.	1	b	...	30.037	79.0	68.0	53	...	0	...	...	
6.	S.E.	2	bc	...	30.039	71.3	67.3	78	70.5	2	...	Str.	
8.	S.E.	1	bc	...	30.044	71.8	66.3	72	...	2	...	Cm. & Str.	
10.	S.E.	1	bc	...	30.063	70.0	66.3	79	...	1	...	Cir cum.	
Midt.	S.E.	1	b	...	30.062	69.8	65.8	78	...	0	...	...	
Totals.	...	11	bc	...	453	20.4	74.0	871	...	7	...	Cum. & Str.	
Mean.	S.E.	1		...	30.038	71.7	66.2	73	69.7	1	...		

SATURDAY, 12TH.

2.	Calm.	0	b	...	30.065	68.5	65.3	82	...	0	...	...	At Yokohama. Temperature by self-registering thermo- meter, max. 79°, min. 66° 5.
4.	Calm.	0	bc	...	30.059	67.8	65.3	85	...	2	Cir.	...	
6.	Calm.	0	bc	...	30.093	68.3	66.3	88	70.0	2	Cir.	...	
8.	sw by s.	2	bc	...	30.114	71.3	67.8	81	...	6	Cir.	Cum.	
10.	S.E.	2	bc	...	30.103	73.3	68.3	74	...	3	...	Cum.	
Noon.	S.E.	3	bc	...	30.091	75.8	69.3	69	...	2	Cir.	Cum.	
2.	sw by s.	4	bc	...	30.046	77.8	69.8	63	...	3	Cir.	Cum.	
4.	S.E.	3	bc	...	30.034	76.8	69.8	67	...	5	Cir str.	Cum. & Str.	
6.	S.E.	2	bc	...	30.027	73.5	68.5	74	69.7	6	...	Cum. & Str.	
8.	S.E.	4	bc	...	29.999	71.8	67.8	79	...	9	...	Nimb.	
10.	S.E.	3	bc	...	29.995	70.8	67.8	83	...	9	Str.	Cum.	
Midt.	S.E.	4	c	...	29.987	70.8	67.8	83	...	10	...	Cum.	
Totals.	...	27	bc	...	613	26.5	93.8	928	...	57	Cir str.	Cum., Str., & Nimb.	
Mean.	s.	2		...	30.051	72.2	67.8	77	69.8	5	...		

## SUNDAY, 13TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sbyw $\frac{1}{2}$ w.	3	od	...	29.955	70.8	67.8	83	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, min. 68° 5.
4.	s $\frac{1}{2}$ e.	3	od	...	29.935	70.3	67.8	85	...	10	...	Str. & Nb.	
6.	s $\frac{1}{2}$ e.	4	ocr	...	29.925	70.0	68.5	91	67.12	10	...	Cum.	
8.	s $\frac{1}{2}$ e.	2	ocr	...	29.923	69.8	67.3	85	...	10	...	Cum.	
10.	s $\frac{1}{2}$ e.	1	ocp	...	29.889	70.3	68.8	91	...	10	...	Cum.	
Noon.	s $\frac{1}{2}$ e.	3	ocp	...	29.861	71.3	69.3	88	...	10	...	Cum.	
2.	s $\frac{1}{2}$ e.	4	cyp	...	29.824	72.8	70.8	89	...	10	...	Cum.	
4.	sbyw $\frac{1}{2}$ w.	3	ocp	...	29.762	72.8	69.8	84	...	10	...	Cum.	
6.	sbyw $\frac{1}{2}$ w.	3	c	...	29.724	72.5	70.3	88	66.5	10	...	Cum. & Str.	
8.	sbyw $\frac{1}{2}$ w.	2	cq	...	29.708	72.8	69.8	84	...	10	...	Cum. & Str.	
10.	sbyw $\frac{1}{2}$ w.	3	cq	...	29.701	73.3	68.8	77	...	10	...	Cum. & Str.	
Midt.	sbyw $\frac{1}{2}$ w.	1	c	...	29.694	71.8	68.8	84	...	10	...	Cum. & Str.	
Totals.	...	32	cyp	...	8901	18.5	107.8	1029	...	120	...	Cum. & Str.	
Mean.	sbyw.	3		...	29.825	71.5	69.0	86	66.8	10	...	Cum. & Str.	

## MONDAY, 14TH.

2.	Caln.	0	bc	...	29.696	70.8	68.8	88	...	4	...	Cum str.	At Yokohama. Temperature by self-registering thermo- meter, max. 77°.
4.	Caln.	0	bc	...	29.670	69.8	67.8	88	...	2	...	Str.	
6.	N.W.N.	1	bc	...	29.681	69.3	67.8	91	65.7	7	Cir str.	Cum. & Str.	
8.	N.E.	1	bcm	...	29.706	69.8	67.8	88	...	8	...	Str.	
10.	Caln.	0	bcm	...	29.736	71.3	69.8	91	...	9	...	Str.	
Noon.	Caln.	0	bcm	...	29.759	73.8	70.8	84	...	9	Cir cum.	...	
2.	s $\frac{1}{2}$ e.	1	bc	...	29.683	75.3	71.8	81	...	6	Cir str.	Cum.	
4.	s $\frac{1}{2}$ e.	1	bc	...	29.662	76.8	72.3	77	...	8	Str.	Cum.	
6.	s $\frac{1}{2}$ e.	2	bcm	...	29.659	74.3	70.8	81	70.0	8	...	Cum. & Str.	
8.	s $\frac{1}{2}$ e.	1	cm	...	29.631	72.0	69.5	87	...	10	...	Cum. & Str.	
10.	s $\frac{1}{2}$ e.	0	oc	...	29.631	71.8	69.3	87	...	10	...	Cum.	
Midt.	s $\frac{1}{2}$ e.	1	ocr	...	29.578	70.3	68.8	91	...	10	...	Cum. & Str.	
Totals.	...	8	bcm & cyp	...	8092	25.3	115.3	1034	135.7	91	...	Cum. & Str.	
Mean.	Variable.	1		...	29.674	72.1	69.6	86	67.8	8	Cir str.	Cum. & Str.	

## TUESDAY, 15TH.

2.	Caln.	0	oc	...	29.534	70.3	68.8	91	...	10	...	Cum. & Str.	At Yokohama. Temperature by self-registering thermo- meter, max. 71° 5, min. 66° 0.
4.	N $\frac{1}{2}$ W.	1	ocr	...	29.510	69.8	68.3	91	...	10	...	Cum. & Str.	
6.	N.E.	1	cr	...	29.494	69.8	68.8	94	69.5	10	...	Cum. & Str.	
8.	N $\frac{1}{2}$ W.	1	cr	...	29.518	67.8	66.5	93	...	10	...	Cum. & Str.	
10.	N.N.E.	1	olm	...	29.539	67.5	66.5	94	...	10	...	Cum. & Str.	
Noon.	N $\frac{1}{2}$ E.	1	cypbm	...	29.537	68.8	67.3	91	...	10	...	Cum. & Str.	
2.	N.E.	3	cypbm	...	29.581	69.8	67.8	88	...	10	...	Cum. & Str.	
4.	N $\frac{1}{2}$ N.	3	cyp	...	29.542	68.8	65.3	81	...	9	...	Cum. & Str.	
6.	N.E.	3	cyp	...	29.592	68.3	65.3	83	68.5	10	...	Cum. & Str.	
8.	N.E.	2	c	...	29.647	65.8	63.8	88	...	10	...	Cum. & Str.	
10.	N $\frac{1}{2}$ N.	2	bc	...	29.651	64.8	61.8	83	...	7	Cir str.	Cum.	
Midt.	N.	2	c	...	29.681	63.8	61.8	88	...	9	Cir str.	Cum.	
Totals.	...	22	cypbm	...	6826	95.3	72.0	105	...	115	...	Cum. & Str.	
Mean.	N.N.E.	2		...	29.569	67.9	66.0	9	69.0	10	Cir str.	Cum. & Str.	

## WEDNESDAY, 16TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	2	oc	...	29.700	62.8	60.8	88	...	10	...	Cum.	At Yokohama. Temperature by self-registering thermo- meter, max. 72°, min. 60°5.
4.	N.E.	3	ocd	...	29.732	63.3	60.8	85	...	10	...	Cum. & Str.	
6.	N.N.E.	2	c	...	29.781	63.3	59.8	80	70.0	9	Cir cum.	Cum.	
8.	N.	2	o	...	29.829	63.8	59.8	77	...	10	...	Str.	
10.	N.	2	bc	...	29.826	66.8	61.3	70	...	4	Cir.	Cum.	
Noon.	E.N.E.	2	bc	...	29.826	67.8	63.3	75	...	5	Cir.	Cum.	
2.	E.	2	bc	...	29.824	69.8	63.8	69	...	3	...	Cum.	
4.	E.	2	bc	...	29.842	70.3	64.3	69	...	3	...	Cum.	
6.	S.E.	2	bc	...	29.838	69.3	64.3	73	68.0	4	...	Cum.	
8.	S.S.E.	1	bc	...	29.864	66.3	62.8	81	68.0	7	...	Cum.	
10.	E.S.E.	3	c	...	29.924	64.8	60.8	78	69.0	10	...	Str.	4 P.M., left Yokohama for the Sandwich islands.
Milt.	E.S.E.	3	c	2	29.888	63.8	61.3	85	69.0	10	...	Str.	
Totals.	...	26		...	9874	72.1	23.1	930	44.0	85			Cum. & Str.
Mean.	E.N.E.	2	bc	2	29.823	66.0	61.9	77	68.8	7	Cir.		

## THURSDAY, 17TH.

2.	E.	3	c	...	29.854	64.8	62.0	84	71.0	10	...	Cum. & Str.	At noon, lat. 34° 37' N. long. 140° 32' E. Temperature by self-registering thermo- meter, max. 76°, min. 63°. Current, N. 74° E. 14'. Numerous sooty albatross and a few small birds seen. Sp. gr. 1.02577.
4.	E.	2	bc	...	29.836	65.5	62.3	82	72.0	7	...	Str.	
6.	S.W.	1	bc	...	29.871	65.8	63.8	88	72.7	8	...	Cum. & Str.	
8.	N.E.	2	bc	...	29.874	68.8	64.8	78	73.0	8	Cir.	Cum.	
10.	S.E.	1	c	...	29.873	68.8	64.8	78	73.0	10	...	Cum. & Str.	
Noon.	S.E.	1	c	...	29.847	68.8	65.3	80	72.8	9	...	Cum. & Str.	
2.	S.E.	2	c	...	29.809	72.3	68.8	81	73.0	9	Str.	Cum.	
4.	S.W.	3	c	...	29.784	73.3	68.8	77	72.5	9	...	Cum.	
6.	S.	4	c	...	29.775	71.8	67.8	79	73.2	10	...	Cum. & Str.	
8.	S.	5	c	...	29.745	70.8	67.8	83	71.5	10	...	Cum. & Str.	
10.	S.	5	or	...	29.746	71.3	69.3	88	72.0	10	...	Cum.	
Milt.	S.	6	or	3	29.740	71.8	68.8	84	72.0	10	...	Cum.	
Totals.	...	35	bc & cr	...	4574	113.8	74.3	22	28.7	110			Cum. & Str.
Mean.	S.E.	3		3	29.813	69.5	66.2	82	72.4	9	Cir. & Str.		

## FRIDAY, 18TH.

2.	S.	6	c	3	29.680	71.8	69.8	89	72.0	10	...	Str.	At noon, lat. 35° 18' N. long. 144° 8' E. Temperature by self-registering thermo- meter, max. 74° 5, min. 70° 0. Current, N. 9° E. 35'.
4.	S.	7	cp	4	29.668	72.3	70.3	89	72.2	10	...	Str.	
6.	S.	6	cp	...	29.671	71.8	70.3	91	72.0	10	...	Cum. & Str.	
8.	S.	7	cp	6	29.676	72.3	70.3	89	71.0	10	...	Cum. & Str.	
10.	S.W.	5	cdm	4	29.682	71.8	70.3	91	68.7	10	...	Cum. & Str.	
Noon.	S.S.W.	6	cdm	4	29.694	72.8	71.3	91	70.0	10	...	Cum. & Str.	
2.	S.S.W.	6	o	4	29.660	73.8	71.8	89	70.5	10	...	Cum.	
4.	S.S.W.	6	o	4	29.650	73.3	71.8	91	70.5	10	...	Cum.	
6.	S.W.	6	opd	4	29.677	74.0	72.3	96	70.7	10	...	Cum. & Str.	
8.	S.W.	6	opd	4	29.685	73.8	72.5	93	71.2	10	...	Cum. & Str.	
10.	S.S.W.	5	c	4	29.735	72.8	71.3	91	69.0	10	...	Cum. & Str.	
Milt.	S.S.W.	6	c	4	29.751	72.3	71.0	93	69.0	10	...	Cum. & Str.	
Totals.	...	72		45	8229	32.8	13.0	7	6.8	120			Cum. & Str.
Mean.	S.W. ½ W.	6	cpdm	4	29.686	72.7	71.1	90	70.6	10	...		

## SATURDAY, 19TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.b.w.	6	om	4	29.779	72.3	71.3	94	70.0	10	...	Cm.&Str.	At noon, lat. 35° 18' N. long. 147° 9' E. Temperature by self-registering thermo- meter, max. 74° 2, min. 71° 0.
4.	s.s.w.	5	om	3	29.769	71.8	70.8	94	70.0	10	...	Cm.&Str.	
6.	s.s.w.	5	cp	4	29.822	71.5	70.8	95	70.5	10	...	Str.	
8.	s.b.w.	6	cp	3	29.858	71.8	70.8	94	70.2	10	...	Str.	
10.	s.w.	4	cm	3	29.868	72.5	71.3	91	70.0	10	...	Str.	
Noon.	s.w.	4	cm	3	29.876	72.5	70.8	90	70.2	10	...	Str.	
2.	s.w.b.w.	5	cm	3	29.862	72.3	69.8	87	70.0	10	...	Cm.&Str.	
4.	s.s.w.	4	cm	...	29.864	72.5	70.8	90	69.0	10	...	Cm.&Str.	
6.	s.s.w.	4	om	2	29.891	71.8	70.8	94	69.0	10	...	Str.	
8.	s.b.w.	4	c	...	29.874	71.8	70.3	91	69.5	10	...	Cm.&Str.	
10.	s.b.w.	5	c	...	29.911	71.8	70.8	94	69.7	10	...	Cm.&Str.	Sp. gr. 1.02581.
Midd.	s.w.	3	c	...	29.918	71.5	70.0	91	69.7	10	...	Cm.&Str.	
Totals	...	55	emp	22	10292	24.4	8.3	25	117.8	120	...	Cum. & Str.	
Mean.	s.s.w.	5		3	29.858	72.0	70.7	92	69.8	10	...	...	

## SUNDAY, 20TH.

2.	s.w.	4	c	...	29.920	71.3	70.3	94	70.0	10	...	Cum.	At noon, lat. 35° 35' N. long. 150° 50' E. Temperature by self-registering thermo- meter, max. 72°, min. 69°. Current, N. 83° E. 13'.
4.	s.s.w.	3	c	...	29.943	70.8	69.8	94	70.0	10	...	Cum.	
6.	s.w.	2	opdm	...	29.961	70.8	69.8	94	70.0	10	...	Str.	
8.	s.b.w.	3	fd	...	29.963	70.3	69.8	97	70.0	10	...	Str.	
10.	s.b.w.	3	cm	...	29.969	71.0	70.8	99	70.2	10	...	Str.	
Noon.	s.b.w.	4	c	...	29.961	71.3	70.5	95	69.7	10	...	Str.&Cum.	
2.	s.b.w.	4	cm	...	29.961	70.8	70.0	95	70.2	10	...	Str.	
4.	s.b.w.	4	fd	...	29.953	71.5	70.5	94	71.0	10	...	Str.	
6.	s.s.w.	4	cm	...	29.956	70.8	69.8	94	70.2	10	...	Str.	
8.	s.s.w.	3	fd	...	29.977	69.8	69.8	100	70.5	10	...	Str.	
10.	s.b.w.	4	fd	...	29.983	69.8	69.8	100	70.5	10	...	Str.	Sp. gr. 1.02599.
Midd.	s.b.w.	4	fd	2	29.963	70.3	69.8	97	70.0	10	...	Str.	
Totals	...	42	fd	...	11510	8.5	0.7	73	2.3	120	...	Str. & Cum.	
Mean.	s.s.w.	3		2	29.959	70.7	70.1	96	70.2	10	...	...	

## MONDAY, 21st.

2.	s.b.w.½w.	4	fd	...	29.960	69.5	69.5	100	68.7	10	...	Str.	At noon, lat 35° 20' N. long. 153° 39' E. Temperature by self-registering thermo- meter, max. 69°, min. 66° 2. Current, N. 83° E. 13'.
4.	s.w.½w.	3	fd	...	29.964	69.5	69.5	100	68.7	10	...	Str.	
6.	w.s.w.	2	fr	...	29.967	67.8	67.8	100	64.5	10	...	Str.	
8.	w.s.w.	3	fr	...	29.962	67.8	66.8	94	65.0	10	...	Str.	
10.	w.s.w.	3	fr	...	30.062	67.3	67.3	100	64.7	10	...	Str.	
Noon.	w.s.w.	3	cmp	...	29.983	67.3	67.3	100	64.7	10	...	Str.	
2.	w.s.w.	4	cdm	...	29.979	67.8	66.8	94	65.5	10	...	Str.&Cum.	
4.	s.s.w.	2	orm	...	29.956	67.5	67.3	99	65.0	10	...	Nimb.	
6.	s.b.w.	3	ocdm	...	29.920	68.5	67.8	97	65.0	10	...	Str.&Cum.	
8.	s.b.w.	2	opdm	...	29.953	67.8	67.3	97	66.0	10	...	Str.&Cum.	
10.	s.b.w.	4	ocd	...	29.960	69.8	69.3	97	69.0	10	...	Str.	One tern seen. Sp. gr. 1.02561.
Midd.	s.b.w.	7	ocd	3	29.907	70.3	70.3	100	69.5	10	...	Str.	
Totals	...	40	ocdf	...	11553	100.9	97.0	98	76.3	120	...	Str. & Cum.	
Mean.	s.w.b.s.	3		3	29.963	68.4	68.1	98	66.4	10	...	...	

## TUESDAY, 22d JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer corrected to sea level.	Thermometer.		Humidity, Sat. to 100.	Temperature of sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.e.	7	oqr	3	29.877	69.8	69.8	100	69.0	10	...	Str.	At noon, lat. 35° 26' S. long. 150° 29' E. Temperature by self-registering thermo- meter, max. 71° 5, min. 66° 5. Current, N. 32 E. 20'. 8.20 a.m., heavy squall.
4.	s.e.	5	oqr	...	29.900	68.8	68.3	97	69.0	10	...	Str.	
6.	s.e.	6	be	...	29.917	69.8	68.5	93	68.0	4	Cir cum.	Cum str.	
8.	s.e.	8	eqm	...	29.942	67.8	66.8	94	68.0	10	...	Str.	
10.	sw $\frac{1}{2}$ w.	3	be	...	29.949	68.8	67.8	94	67.7	8	Cir str.	Cum&Cumst	
Noon.	sw $\frac{1}{2}$ s.	4	be	...	29.974	70.3	68.8	91	68.0	5	Cir.	Cum&Str.	
2.	wbs $\frac{1}{2}$ s.	3	be	2	29.988	69.3	67.3	88	68.0	3	Cir str.	Cum&Str.	
4.	wbs $\frac{1}{2}$ s.	2	be	...	30.022	70.5	68.8	89	68.5	3	...	Str.	
6.	wbs $\frac{1}{2}$ s.	2	be	...	30.051	69.8	68.3	91	68.5	5	...	Str.	
8.	sw $\frac{1}{2}$ w.	1	be	...	30.053	68.8	67.8	94	68.2	5	Cir cum.	Str.	
10.	s $\frac{1}{2}$ w.	0	be	...	30.068	68.8	67.8	94	68.5	7	...	St.&Cumst.	
Midlt.	s-s $\frac{1}{2}$ e.	2	ompd	...	30.058	68.8	68.3	97	68.7	10	...	Str.	
Totals.	...	42	beqpr	5	117.99	111.3	98.3	42	100.1	80	Cir str.	Cum., Str., & Cum str.	
Mean.	s.s.w.	4		2	29.983	69.3	68.2	93	68.3	7			

## WEDNESDAY, 23d.

2.	s.e.	2	ofl	2	30.018	68.8	68.8	100	68.5	10	...	Str.	At noon, lat. 35° 41' N. long. 157° 45' E. Temperature by self-registering thermo- meter, max. 72°, min. 67° 5. Current, N. 17° E. 20'. Several sooty albatross seen. Sp. gr. 1.02580.
4.	s $\frac{1}{2}$ w.	3	ofl	...	30.018	69.0	69.0	100	69.0	10	...	Str.	
6.	s.s.w.	3	fld	...	30.016	69.0	68.8	99	69.2	10	...	Str.	
8.	s.s.w.	2	fl	...	30.020	69.8	69.8	100	69.2	10	...	Str.	
10.	s.s.w.	3	fl	...	30.010	70.0	69.5	97	69.2	10	...	Str.	
Noon.	s.s.w.	3	od	...	30.002	70.3	69.8	97	69.2	10	...	Str.	
2.	s.w.	3	op	...	29.965	70.8	69.8	94	69.0	10	...	Str.	
4.	s.w.	4	op	...	29.943	71.0	69.8	93	69.0	10	...	Str.	
6.	sbw $\frac{1}{2}$ w.	4	om	...	29.948	70.5	69.5	94	69.0	10	...	Str.	
8.	sbw $\frac{1}{2}$ w.	6	oq	...	29.955	69.8	69.8	100	68.0	10	...	Str.	
10.	s $\frac{1}{2}$ w.	4	oq	...	29.968	69.8	69.3	97	67.7	10	...	Str.	
Midlt.	s $\frac{1}{2}$ w.	5	oq	...	29.950	69.0	68.3	95	67.0	10	...	Str.	
Totals.	...	42	oflq	...	118.22	117.8	112.2	86	104.0	120	...	Str.	
Mean.	s.s.w.	3		2	29.985	69.8	69.4	97	68.7	10			

## THURSDAY, 24th.

2.	s.b.e.	5	e	...	29.937	68.8	68.8	100	69.0	10	...	Cum&Str	At noon, lat. 35° 32' S. long. 161° 13' E. Temperature by self-registering thermo- meter, max. 71° 5, min. 67° 5. Current, N. 25 E. 13'. Sp. gr. 1.02596. Black bulb 167°. 2.35 p.m., passed two or three patches of discoloured water. 10.30 p.m., passed a patch of phosphor- escent water.
4.	s $\frac{1}{2}$ w.	4	be	...	29.933	68.8	67.8	94	66.0	5	...	Cum.	
6.	s $\frac{1}{2}$ w.	5	be	...	29.969	68.8	67.8	94	65.5	9	Cir cum.	Cir cum.	
8.	s $\frac{1}{2}$ w.	5	be	...	29.981	68.8	68.0	95	66.5	7	Cir str.	Cir cum.	
10.	s $\frac{1}{2}$ e.	4	be	...	29.982	70.2	68.8	95	67.0	7	Cir str.	Cum&Cum	
Noon.	s $\frac{1}{2}$ w.	5	beq	...	29.968	70.3	69.8	91	67.0	7	Cir str.	Cum&Str.	
2.	s $\frac{1}{2}$ w.	5	bea	...	29.961	70.8	69.8	94	68.2	9	...	Str.	
4.	s $\frac{1}{2}$ w.	4	cm	...	29.947	70.8	69.8	94	68.5	10	...	Str.	
6.	sbw $\frac{1}{2}$ e.	5	hem	...	29.957	71.3	69.8	91	68.5	9	Cir str.	Cum.	
8.	sbw $\frac{1}{2}$ w.	4	cm	...	29.969	69.8	69.0	95	68.5	9	Cir str.	Cum.	
10.	sbw $\frac{1}{2}$ w.	5	hem	...	29.976	70.3	69.8	97	69.5	7	...	Cum.	
Midlt.	s.s.w.	4	cm	...	29.984	70.8	69.8	94	69.2	9	...	Cum.	
Totals.	...	55	beqm	...	115.64	119.5	108.0	52	20.4	97	Cir cum., Cum., & Str.		
Mean.	sbw.	5		...	29.964	70.0	69.0	94	67.5	8			

## FRIDAY, 25TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw <sup>b</sup> s.	4	e	...	30.971	69.8	69.0	95	67.7	10	...	Cum.	At noon, lat. 35° 22' N. long. 164° 33' E. Temperature by self-registering thermo- meter, max. 72° 7', min. 68°. Current, N. 18° E. 10'. Swell from W. 2 boatswain birds, some sooty albatross, and a few small birds seen. Sp. gr. 1.02578.
4.	sw <sup>b</sup> s.	3	e	...	30.985	69.5	68.8	95	67.0	10	...	Cum.	
6.	sw <sup>b</sup> s.	4	bc	...	30.018	69.3	68.3	94	67.0	8	...	Cm.&Str.	
8.	sw <sup>b</sup> w.	3	e	...	30.038	69.8	68.8	94	67.5	10	...	Cm.&Str.	
10.	sw <sup>b</sup> w.	3	e	...	30.059	69.5	69.0	97	68.0	9	...	Cum.	
Noon.	sw <sup>b</sup> w.	12	e	...	30.059	71.0	69.8	93	68.5	9	...	Cm.&Str.	
2.	sw <sup>b</sup> w.	3	e	...	30.065	71.8	70.3	91	69.5	9	...	Cm.&Str.	
4.	sw <sup>b</sup> s.	12	bc	...	30.060	71.8	70.3	91	70.0	3	Cir str.	Cm.&Str.	
6.	W.S.W.	3	bc	12	30.068	72.8	70.5	88	70.0	7	Cir.	Cm.&Str.	
8.	sw <sup>b</sup> s.	12	bc	...	30.084	71.3	70.3	94	69.5	9	Cir cum.	Cum.	
10.	W.S.W.	3	e	...	30.107	70.3	69.3	94	68.5	10	...	Cm.&Str.	
Midt.	sw <sup>b</sup> s.	3	bc	...	30.085	70.3	69.3	94	68.5	7	Cir.	Cm.&Str.	
Totals.	...	35	bc	...	599	7.2	113.7	40	101.7	101	Cir.	Cum. & Str.	
Mean.	s.w.	3		2	30.050	70.6	69.5	93	68.5	8			

## SATURDAY, 26TH.

2.	sw <sup>b</sup> s.	3	bc	...	30.085	71.8	70.3	91	70.5	4	Cr.&Cm.	...	At noon, lat. 35° 24' N. long. 166° 35' E. Temperature by self-registering thermo- meter, max. 75° 5', min. 69° 5'. Current, N. 35° E. 16'. Upper clouds from w <sup>b</sup> s. Several sooty albatross seen. Sp. gr. 1.02569.
4.	sw <sup>b</sup> s.	12	bc	...	30.082	71.8	69.8	89	70.7	3	Cir.	Cum.	
6.	w <sup>b</sup> s.	12	bc	...	30.105	71.8	70.8	94	70.7	2	Cir str.	...	
8.	w <sup>b</sup> s.	12	bc	...	30.121	72.8	71.5	93	71.0	5	Cir str.	Cm.&Str.	
10.	w <sup>b</sup> s.	12	bc	...	30.118	74.0	71.0	84	71.5	5	Cr.&Cm.	Cum.	
Noon.	w.	1	bc	...	30.112	73.8	71.0	85	72.0	8	Cr.&Cm.	Cm.&Str.	
2.	w <sup>b</sup> s.	1	bc	...	30.103	74.3	71.8	87	72.0	8	Cm.&Str.	...	
4.	sw <sup>b</sup> s.	2	bc	1	30.069	74.3	71.8	87	72.0	8	Cir cum.	Cm.&Str.	
6.	sw <sup>b</sup> s.	1	bc	...	30.114	73.0	71.3	90	72.0	9	Str.	Cm.&Str.	
8.	sw <sup>b</sup> w.	2	bc	...	30.112	72.5	71.3	93	71.7	8	Cir str.	Cm.&Str.	
10.	s.	1	bc	...	30.107	71.8	70.8	94	71.7	8	...	Cum.	
Midt.	sw <sup>b</sup> w.	1	bc	...	30.116	72.3	71.3	94	71.5	9	...	Cum.	
Totals.	...	20	bc	...	1244	34.2	12.7	1	17.3	77	Cir cum. & Str.	Cum. & Str.	
Mean.	s.w.	2		1	30.104	72.8	71.1	90	71.4	6			

## SUNDAY, 27TH.

2.	sw <sup>b</sup> w.	2	ocd	...	30.115	71.5	70.8	95	71.0	10	...	Cm.&Str.	At noon, lat. 35° 22' N. long. 168° 29' E. Temperature by self-registering thermo- meter, max. 72° 5', min. 70°. Current, N. 77° E. 23'. Black bulb 119°. Sp. gr. 1.02605.
4.	s.	3	ocd	...	30.111	70.8	70.3	87	71.0	10	Cir.	Cm.&Str.	
6.	s.s.w.	2	om	...	30.124	71.0	70.3	95	71.0	10	...	Str.	
8.	s.	3	e	...	30.110	70.8	70.0	95	70.2	10	...	Str.	
10.	s.	2	bc	...	30.121	70.8	69.8	94	69.7	8	Cir.	Str.	
Noon.	sw <sup>b</sup> s.	2	bc	...	30.124	71.8	70.3	91	70.2	8	Cir cum.	Str.	
2.	sw <sup>b</sup> w.	1	bc	...	30.099	71.8	70.5	93	70.5	8	Cir cum.	Cm.&Str.	
4.	s.	2	bc	...	30.087	71.8	70.3	91	70.0	7	Cir cum.	Cm.&Str.	
6.	s.	1	bc	...	30.108	71.8	70.0	90	70.0	4	Cir str.	Str.	
8.	s.	2	bc	...	30.106	70.8	69.3	91	69.0	7	Cir str.	Str.	
10.	s.	1	bc	...	30.112	71.0	69.8	93	69.2	5	...	Cm.&Str.	
Midt.	s.	2	f	...	30.088	71.0	70.8	89	69.7	10	...	Str.	
Totals.	...	23	bc	...	1365	14.9	2.2	44	1.5	97	Cir cum. & Str.	Cum. & Str.	
Mean.	s.w.	2		...	30.109	71.2	70.2	94	70.1	8			

MONDAY, 28TH JUNE 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. - Deg.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.	1	bc	...	30.070	70.8	70.5	99	70.0	8	...	Cm.&Str.	At noon, lat. 35° 22' S. long. 169° 53' E. Temperature by self-registering thermometer, max. 73° 2, min. 69°. Current, S. 63° E. 15'.  Sp. gr. 1.02575.
4.	s.b.w.	2	bc	...	30.075	71.3	70.8	97	70.0	9	...	Cm.&Str.	
6.	s.b.w.	1	bc	...	30.107	71.3	70.8	97	70.2	9	Cir cum.	Cm.&Str.	
8.	w.s.w.	1	edp	...	30.123	71.3	70.8	97	70.0	10	...	Cm.&Str.	
10.	w.b.s.s.	1	cp	...	30.128	70.8	70.3	97	70.2	10	...	Str.&Nb.	
Noon.	s.s.w.	2	bep	...	30.117	71.8	70.3	91	70.5	8	Cir cum.	Cm.&Str.	
2.	s.b.w.	2	e	...	30.119	72.8	71.0	90	71.0	9	...	Cm.&Cumst	
4.	s.b.w.	3	cp	...	30.121	72.5	70.5	89	71.0	10	...	Cm.&Cumst	
6.	s.	3	c	...	30.145	71.8	68.5	83	70.0	9	Str.	Cm.&Str.	
8.	s.s.e.	2	e	...	30.171	71.3	69.8	91	69.5	10	...	Cm.&Str.	
10.	s.s.e.	2	e	...	30.197	70.8	69.8	94	69.0	9	...	Cm.&Str.	
Midt.	s.e.s.	3	bc	...	30.184	70.8	69.8	94	69.0	2	...	Cm.&Str.	
Totals.	...	23	bep	...	1557	47.3	2.9	39	0.4	103	Cum., Str., & Cum str.		
Mean.	s.b.w.	2		...	30.130	71.4	70.2	93	70.0	9			

TUESDAY, 29TH.

2.	s.e.s.	3	bew	...	30.186	70.5	69.8	95	69.7	3	...	Cm.&Str.	At noon, lat. 35° 49' N. long. 171° 46' E. Temperature by self-registering thermometer, max. 73° 2', min. 65° 7'. Current, N. 45° E. 18'. Black bulb 120'.  Sp. gr. 1.02576.
4.	s.e.s.	2	bew	...	30.186	70.5	69.8	95	70.0	5	Cir str.	Str.	
6.	s.e.s.	2	bc	...	30.193	70.0	69.0	94	68.0	3	Cir str.	Cum.	
8.	s.e.	1	bc	...	30.239	71.5	70.0	91	69.0	5	Cir str.	...	
10.	s.e.b.e.	1	bc	...	30.268	72.3	70.3	89	69.5	4	Cir str.	...	
Noon.	s.e.b.e.	4	bc	...	30.245	71.8	69.8	89	70.0	3	Cir str.	Cm.&Str.	
2.	s.e.b.e.	3	bc	...	30.241	72.3	70.8	91	71.0	3	Cir str.	...	
4.	s.e.	4	bcm	...	30.237	70.8	69.8	94	70.0	8	Cir.	Str.	
6.	s.e.s.	3	bc	...	30.247	71.3	70.3	94	69.7	3	Cir.	Cum str.	
8.	s.e.s.	3	bc	...	30.261	70.5	69.5	94	69.0	3	Cir.	Cum.	
10.	s.e.s.	4	bcm	...	30.293	69.8	68.8	94	69.0	2	Cir.	...	
Midt.	s.s.e.	3	f	1	30.286	69.8	68.8	94	69.0	10	...	Str.	
Totals.	...	33	bcm	...	2882	11.1	116.7	34	113.9	52	Cir str.	Str. & Cum.	
Mean.	s.e.½ s.	3		1	30.240	70.9	69.7	93	69.5	4			

WEDNESDAY, 30TH.

2.	s.b.e.	4	fd	...	30.270	69.8	69.8	100	69.5	10	...	Str.	At noon, lat. 36° 22' N. long. 174° 23' E. Temperature by self-registering thermometer, max. 72° 8', min. 67° 0'. Current, N. 16° W. 15'. 8.15 A.M., fog lifted. Black bulb, 122'. Sp. gr. 1.02561.
4.	s.s.e.	3	fd	...	30.277	68.8	68.8	100	69.0	10	...	Str.	
6.	s.b.e.	2	f	...	30.307	68.3	68.0	99	68.0	10	...	Str.	
8.	s.s.e.	2	f	...	30.309	68.0	67.8	99	67.7	10	...	Str.	
10.	s.b.e.	2	bc	...	30.318	69.8	68.8	94	68.0	1	Cir.	Cum.	
Noon.	s.s.e.	3	bc	...	30.318	69.8	68.8	94	69.5	1	Cir.	Str.	
2.	s.e.s.	2	bc	...	30.290	71.8	69.8	89	70.0	2	Cir str.	...	
4.	s.	2	bc	...	30.291	71.8	69.8	89	70.0	3	Cir str.	...	
6.	s.b.e.	1	bc	1	30.297	72.3	70.3	89	69.0	2	Cir str.	...	
8.	s.b.e.	1	b	...	30.306	69.5	68.5	94	69.2	3	Cir str.	...	
10.	s.e.s.	1	bew	...	30.312	69.5	68.5	94	69.0	1	...	Str.	
Midt.	s.e.s.	1	bew	...	30.308	69.8	68.8	94	69.5	1	...	Str.	
Totals.	...	24	bef	...	3603	119.2	107.7	55	108.4	54	Cir str.	Cum. & Str.	
Mean.	s.s.e.	2		1	30.300	69.9	69.0	95	69.0	5			

THURSDAY, 1st JULY 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.				Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.	Humidity.	Surf. 100.			Upper.	Lower.	
2.	SSE 1/2 E.	1	bw	...	30-304	69.2	68.8	97	69.0	0	...	...	...	At noon, lat. 36° 8' N. long. 176° 11' E. Temperature by self-registering thermometer, max. 74° 5, min. 68° 0. Current, N. 77° W. 9'. Black bulb, 129° 5. Sp. gr. 1.02557.
4.	SSE 1/2 E.	1	bmw	...	30-328	69.8	69.3	97	69.0	0	...	...	...	
6.	S 1/2 W.	1	bc	...	30-362	70.0	69.3	96	71.0	3	...	Cum.	...	
8.	S 1/2 W.	1	bc	...	30-376	70.8	69.8	94	71.2	2	...	Cum.	...	
10.	S 1/2 W.	2	bc	...	30-371	71.8	70.0	90	72.2	2	...	Cum. & Str.	...	
Noon.	S 1/2 W.	2	bc	...	30-365	73.5	70.5	84	72.5	3	Cir.	Cum. & Str.	...	
2.	SSE 1/2 E.	1	bcp	...	30-344	72.8	69.8	84	74.0	7	...	Cum. & Cum. str.	...	
4.	S 1/2 E.	1	bc	...	30-322	73.8	70.3	81	73.7	7	Cir.	Cum. & Cum. str.	...	
6.	Variable.	0	c	...	30-362	73.8	70.8	84	73.7	9	...	Cum.	...	
8.	SSE 1/2 E.	1	c	...	30-376	73.3	70.8	87	73.7	9	...	Cum. str. & Str.	...	
10.	SSE 1/2 E.	1	bc	...	30-380	73.3	70.8	87	73.7	6	Cir.	Cum.	...	
Midd.	SSE 1/2 E.	2	bc	...	30-380	72.8	69.8	84	73.5	3	...	Cum.	...	
Totals.	...	14	...	...	4270	25.0	0.0	105	27.2	51	...	Cir.	Cum., Str., & Cum. str.	
Mean.	SSE 1/2 E.	1	bcp	...	30-356	72.1	70.0	89	72.3	4	...	Cir.	Cum. str.	

FRIDAY, 2d.

2.	SSE 1/2 E.	1	bc	...	30-383	71.8	68.3	81	73.0	1	...	Cum.	...	At noon, lat. 36° 10' N. long. 178° 0' E. Temperature by self-registering thermometer, max. 76°, min. 69° 7. Current, N. 14° E. 28'. Sp. gr. 1.02576. Black bulb 124°. Two boatswain birds and several brown albatross seen. Upper clouds from E.N.E
4.	SSE 1/2 E.	1	bc	...	30-388	71.5	68.8	84	72.0	1	...	Cum. & Cum. str.	...	
6.	Caln.	0	bc	...	30-409	71.8	69.3	87	72.7	2	...	Cum. & Cum. str.	...	
8.	E 1/2 S.	1	bc	...	30-421	73.8	70.8	84	73.0	3	Cir cum.	Cum.	...	
10.	NE 1/2 E.	1	bc	...	30-449	72.8	69.8	84	73.0	4	Cir str.	Cum.	...	
Noon.	E 1/2 S.	1	bc	...	30-448	73.3	69.8	82	73.0	2	Cir.	Cum.	...	
2.	SE 1/2 S.	1	bc	...	30-466	75.5	69.8	71	72.2	3	Cir.	Cum.	...	
4.	SSE 1/2 E.	1	bc	...	30-411	75.3	69.8	72	73.0	2	Cir.	Cum.	...	
6.	Caln.	0	bc	...	30-430	74.8	69.3	72	73.5	2	Str.	Cum.	...	
8.	E 1/2 N.	1	bc	...	30-429	73.8	68.8	74	74.0	3	Cir.	Cum.	...	
10.	E 1/2 N.	1	bc	...	30-441	73.3	69.3	79	74.0	5	...	Cum. & Nub.	...	
Midd.	E 1/2 S.	1	c	...	30-423	72.8	69.8	84	74.0	10	...	Cum.	...	
Totals.	...	10	...	...	5038	40.5	113.6	954	37.4	38	...	Cir str.	Cum. & Cum. str.	
Mean.	E.S.E.	1	bc	...	30-420	73.4	69.5	79	73.1	3	...	Cir str.	Cum. & Cum. str.	

SATURDAY, 3d.

2.	E 1/2 N.	1	bc	...	30-413	71.8	68.5	83	73.0	3	Cir.	Cum.	...	At noon, lat. 35° 49' N. long. 180° 0' E. Temperature by self-registering thermometer, max. 75°, min. 69°. Current, S. 22° E. 6'. Sp. gr. 1.02581.
4.	E 1/2 S.	1	bc	...	30-413	71.5	67.5	78	72.7	3	Cir.	Cum.	...	
6.	E 1/2 N.	2	bc	...	30-454	70.8	67.8	83	72.2	8	...	Cum.	...	
8.	E 1/2 S.	1	bc	...	30-460	71.3	67.8	81	72.0	7	...	Cum.	...	
10.	E 1/2 S.	2	bc	...	30-450	70.8	67.5	82	72.5	8	...	Cum.	...	
Noon.	E 1/2 S.	2	bc	...	30-440	72.3	68.3	79	72.5	7	...	Cum.	...	
2.	E 1/2 N.	2	c	...	30-419	74.3	69.8	77	73.0	10	...	Cum. & Str.	...	
4.	E 1/2 S.	2	c	...	30-403	72.8	68.5	78	73.0	8	...	Cum. str. & Nub.	...	
6.	NE 1/2 E.	3	cpd	...	30-409	70.8	67.8	83	73.0	9	...	Cum. & Cum. str.	...	
8.	NE 1/2 E.	1	cpd	...	30-426	69.8	66.8	83	72.7	9	...	Cum.	...	
10.	E.N.E.	3	c	1	30-417	70.3	66.8	81	72.5	10	...	Cum.	...	
Midd.	E.N.E.	1	bcm	1	30-417	69.3	66.8	85	72.5	5	...	Cum.	...	
Totals.	...	21	...	...	5421	15.8	93.9	13	31.6	87	...	Cir.	Cum., Str., & Cum. str.	
Mean.	E 1/2 N.	2	bcpd	1	30-427	71.3	67.8	81	72.6	7	...	Cir.	Cum., Str., & Cum. str.	

## SUNDAY, 4TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E. N. E.	2	c	...	30.399	68.8	66.8	88	72.5	10	...	Cum.	At noon, lat. 36° 42' N. long. 179° 50' W. Temperature by self-registering thermo- meter, max. 72°, min. 66° 7. Current, N. 6'. Black bulb 118°.
4.	E. N. E.	0	c	...	30.399	69.3	65.8	80	72.0	10	...	Cum.	
6.	SSE $\frac{1}{2}$ E.	1	bcpd	...	30.403	68.5	66.5	88	72.0	8	...	Cum.	
8.	E. S. E.	2	bcp	...	30.411	69.5	66.3	82	72.2	9	...	Cum.	
10.	E $\frac{1}{2}$ SE $\frac{1}{2}$ S.	1	bc	...	30.401	71.3	67.5	79	72.5	6	Cir.	Cum.	Sp. gr. 1.02580.  One whale seen.
Noon.	SE $\frac{1}{2}$ E.	0	bc	...	30.389	71.3	67.8	81	73.2	8	...	Cum & Cms	
2.	SE $\frac{1}{2}$ E.	2	bc	...	30.362	70.8	67.8	85	73.5	5	Str.	Cum.	
4.	SE $\frac{1}{2}$ E.	2	bc	...	30.374	71.3	67.3	78	73.0	7	...	Cum.	
6.	SE $\frac{1}{2}$ E.	1	bc	1	30.364	71.3	67.8	81	73.0	5	...	Cum & Nb.	One whale seen.
8.	SE $\frac{1}{2}$ E.	...	bc	...	30.364	70.3	67.8	85	72.5	5	...	Cum & Nb.	
10.	SE $\frac{1}{2}$ E.	1	bc	...	30.382	69.8	66.8	85	72.5	7	...	Cum & Nb.	
Midt.	SE $\frac{1}{2}$ S.	2	bcpd	...	30.380	69.8	65.8	78	71.5	9	...	Cum & Nb.	
Totals.	...	14		5	4628	2.0	84.0	986	30.4	89	Cir str.	Cum. & Nimb.	
Mean.	SE $\frac{1}{2}$ E.	1		2	30.386	70.2	67.0	82	72.5	7			

SUNDAY, 4TH (*his*).

2.	Caln.	0	opdm	2	30.376	70.3	66.3	78	71.0	10	Cir.	Cum.	At noon, lat. 36° 59' N. long. 178° 56' W. Temperature by self-registering thermo- meter, max. 72°, min. 68°. Current, N. 75° E. 17'.
4.	SSE $\frac{1}{2}$ E.	2	ocm	2	30.391	69.8	64.8	73	71.0	10	Cir.	Cum.	
6.	S $\frac{1}{2}$ E.	1	o	2	30.399	69.8	65.8	78	71.0	10	...	Cum.	
8.	S. S. E.	2	e	2	30.415	69.5	65.5	78	71.0	10	...	Cum.	
10.	S $\frac{1}{2}$ E.	1	e	1	30.418	69.8	65.8	78	70.7	10	Cir.	Cum.	Swell from S. S. W. Sp. gr. 1.02568.
Noon.	S $\frac{1}{2}$ E.	0	e	1	30.413	70.5	65.0	71	71.0	10	...	Cum.	
2.	S $\frac{1}{2}$ E.	1	e	...	30.389	71.3	66.0	72	71.0	10	...	Cum.	
4.	S $\frac{1}{2}$ W $\frac{1}{2}$ W.	0	e	...	30.375	71.5	66.5	73	71.0	10	...	Cum.	
6.	Caln.	0	e	...	30.374	70.8	66.3	75	71.0	10	...	Cum & Cms	Black bulb 127°.
8.	Caln.	0	e	...	30.376	70.8	66.8	78	71.0	10	...	Cum & Str.	
10.	Variable.	1	e	...	30.393	70.8	66.8	78	70.2	10	...	Cum & Str.	
Midt.	Variable.	0	e	...	30.390	70.5	67.5	83	69.5	10	...	Cum.	
Totals.	...	8		10	4709	5.4	73.1	75	9.4	120	Cir.	Cum. & Str.	
Mean.	S $\frac{1}{2}$ E.	1		2	30.392	70.4	66.1	76	70.8	10			

## MONDAY, 5TH.

2.	S $\frac{1}{2}$ W $\frac{1}{2}$ W.	1	c	...	30.378	69.8	67.3	85	69.5	10	...	Cum.	At noon, lat. 37° 41' N. long. 177° 4' W. Temperature by self-registering thermo- meter, max. 76°, min. 68°. Current, N. 75° E. 18°.
4.	NW $\frac{1}{2}$ W.	0	c	...	30.371	69.8	65.8	78	70.0	9	...	Cum.	
6.	W. S. W.	2	e	...	30.372	69.8	66.3	81	69.5	9	...	Cum.	
8.	W.	1	bc	1	30.381	70.2	65.3	73	69.2	8	...	Cum.	
10.	W. N. W.	2	bc	2	30.370	70.8	66.3	75	69.5	9	...	Cum & Cms	Two boatwain birds and some albatross seen. Sp. gr. 1.02578.
Noon.	W. N. S.	1	bc	...	30.368	73.3	68.8	77	70.0	8	...	Cum.	
2.	W. N. S.	2	bc	...	30.335	74.8	70.0	75	70.5	8	...	Cum.	
4.	W. S. W.	3	bc	...	30.330	72.8	68.3	76	70.2	8	Cir.	Cum.	
6.	W. N. S.	1	bc	...	30.329	71.8	68.8	84	70.0	8	...	Cum.	Black bulb 127°.
8.	W. N. S.	2	bc	1	30.329	70.8	67.8	83	69.7	9	Str.	Cum.	
10.	W. N. S.	2	e	2	30.331	69.8	67.8	88	70.0	10	...	Str.	
Midt.	W. N. S.	2	e	...	30.309	69.8	67.8	88	70.2	10	...	Str.	
Totals.	...	19		6	4203	13.5	90.3	3	118.3	106	Cir str.	Cum. & Str.	
Mean.	W.	2		1	30.350	71.1	67.5	80	69.9	9			

## TUESDAY, 6TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 4.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wbs $\frac{1}{2}$ s.	2	e	...	30.282	69.8	67.5	87	69.5	10	...	Str.	At noon, lat. 38° 6' N. long. 175° 30' W. Temperature by self-registering thermo- meter, max. 71°, min. 66° 5'. Current, N. 66° E. 5'. Saw two boatwain birds. Passed large quantities of barnacles. Sp. gr. 1.02562.
4.	w $\frac{1}{2}$ s.	2	oe	...	30.264	69.8	67.0	84	68.5	9	...	Str.	
6.	wbs $\frac{1}{2}$ s.	2	e	...	30.266	68.8	66.8	88	66.7	10	...	Cum.	
8.	wbs $\frac{1}{2}$ s.	2	e	...	30.241	69.3	67.3	88	66.7	10	...	Cum. & Cum.st.	
10.	swbw $\frac{1}{2}$ w.	3	bc	2	30.221	70.0	67.3	84	66.0	8	Cir.	Cum.	
Noon.	wbs $\frac{1}{2}$ s.	4	bc	3	30.194	69.8	67.3	85	67.0	9	Str.	Cum.	
2.	w $\frac{1}{2}$ s.	3	ed	...	30.150	68.3	65.8	85	66.5	10	...	Cum str.	
4.	wbs $\frac{1}{2}$ s.	4	cdm	...	30.115	67.8	65.8	88	66.7	10	...	Str.	
6.	swbw $\frac{1}{2}$ w.	5	oeup	...	30.068	67.8	66.0	89	66.5	10	...	Cum str. & St.	
8.	swbw $\frac{1}{2}$ w.	4	oeup	...	30.015	66.8	65.8	94	68.0	10	...	Cum. & Str.	
10.	wbs $\frac{1}{2}$ s.	7	orq	...	29.975	66.8	66.3	97	66.0	10	...	Str.	
Midd.	w $\frac{1}{2}$ s.	6	or	4	29.943	66.3	65.8	97	65.7	10	...	Str.	
Totals.	...	44	cyptr	9	1734	101.3	78.7	106	83.8	116	Cir & Str.	Cum., Str., & Cum str.	
Mean.	wbs $\frac{1}{2}$ s.	4		3	30.144	68.4	66.6	89	67.0	10			

## WEDNESDAY, 7TH.

2.	w $\frac{1}{2}$ s.	6	odm	5	29.897	65.8	65.3	97	64.5	10	...	Str.	At noon, lat. 37° 59' N. long. 171° 48' W. Current, S. 13° E. 10'.  Sp. gr. 1.02544.
4.	w $\frac{1}{2}$ s.	6	odm	4	29.870	65.8	65.3	97	64.5	10	...	Str.	
6.	w $\frac{1}{2}$ s.	6	omp	...	29.872	65.8	64.8	94	66.0	10	...	Str.	
8.	w $\frac{1}{2}$ s.	5	oeup	...	29.868	65.3	64.8	97	65.2	10	...	Str.	
10.	swbw.	6	cpdq	...	29.851	64.8	64.3	97	65.2	10	...	Str. & Cum.	
Noon.	swbw.	5	ed	...	29.852	66.3	64.0	87	65.2	10	...	Str. & Cum.	
2.	swbw $\frac{1}{2}$ w	6	bcq	5	29.857	66.8	64.0	84	65.0	8	...	Cum.	
4.	swbw $\frac{1}{2}$ w	4	e	...	29.845	65.3	62.8	85	65.0	9	...	Cum.	
6.	swbw $\frac{1}{2}$ w.	5	ep	...	29.860	64.8	62.8	88	64.0	10	...	Str. & Cum.	
8.	swbw $\frac{1}{2}$ w.	4	cm	...	29.859	63.8	62.5	93	64.0	9	Cir cum.	Cum.	
10.	n $\frac{1}{2}$ w.	4	bc	...	29.888	62.8	61.0	89	62.5	8	...	Cum.	
Midd.	n $\frac{1}{2}$ w.	4	bc	...	29.891	62.8	60.8	88	62.5	9	...	Cum.	
Totals.	...	60	cypd	14	10410	60.1	42.4	16	53.6	113	Cir cum.	Cum. & Str.	
Mean.	swbw.	5		5	29.868	65.0	63.5	91	64.5	9			

## THURSDAY, 8TH.

2.	swbw.	5	ocm	...	29.893	62.3	60.8	91	62.5	10	...	Cum.	At noon, lat. 37° 48' N. long. 169° 11' W. Temperature by self-registering thermo- meter, max. 66° min. 61'. Current, S. 7'.  Saw a shoal of porpoise. Sp. gr. 1.02552.
4.	swbw $\frac{1}{2}$ w	4	ocdm	3	29.891	61.8	60.8	94	62.2	10	...	Cum.	
6.	wbs $\frac{1}{2}$ s.	3	fd	3	29.908	62.3	61.8	97	62.2	10	...	Str.	
8.	w $\frac{1}{2}$ s.	3	odm	3	29.933	62.3	61.8	97	62.2	10	...	Str.	
10.	w $\frac{1}{2}$ s.	3	odm	3	29.936	63.0	62.5	97	62.5	10	...	Str.	
Noon.	w $\frac{1}{2}$ s.	3	odm	2	29.932	63.8	62.8	94	63.0	10	...	Str.	
2.	swbw $\frac{1}{2}$ w	3	epd	...	29.910	64.8	62.8	88	63.2	9	Str.	Cum.	
4.	sw $\frac{1}{2}$ w.	4	bc	...	29.911	64.8	62.3	85	63.5	6	Cir.	Cum.	
6.	swbw $\frac{1}{2}$ w.	5	epd	...	29.934	63.5	61.8	89	62.7	10	...	Str. & Cum.	
8.	swbw $\frac{1}{2}$ w.	3	epd	...	29.934	62.8	61.3	91	62.2	10	...	Str. & Cum. & Cum str.	
10.	swbw $\frac{1}{2}$ s.	3	epd	...	29.943	61.8	61.5	98	63.5	10	...	Str.	
Midd.	sw $\frac{1}{2}$ s.	3	bcqd	...	29.950	61.5	60.5	94	63.5	6	...	Str.	
Totals.	...	39	cypdm	14	11075	34.7	20.7	35	33.2	111	Cir & Str.	Cum. & Str.	
Mean.	swbw.	3		3	29.923	62.9	61.7	93	62.8	9			

## FRIDAY, 9TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw $\frac{1}{2}$ N.	3	bepd	...	29.961	61.3	60.3	94	64.7	7	Str.	Cum.	At noon, lat. 37° 49' N. long. 166° 43' W. Temperature by self-registering thermo- meter, max. 66° 5, min. 60° 0. Current, N. 20° E. 10'. Sp. gr. 1.02566.
4.	sw $\frac{1}{2}$ N.	4	bepd	...	29.963	60.8	59.5	93	64.5	6	...	Cum.	
6.	sw $\frac{1}{2}$ W.	4	emul	...	29.984	62.3	61.5	95	64.5	10	...	Str.	
8.	wb $\frac{1}{2}$ N.	5	em	...	29.986	64.8	63.3	91	65.0	8	...	Cum.	
10.	wb $\frac{1}{2}$ N.	5	o	...	29.993	63.8	62.3	91	65.0	10	...	Str.	
Noon.	w $\frac{1}{2}$ N.	4	e	...	29.992	64.8	62.8	88	65.0	9	...	Str.	
2.	w $\frac{1}{2}$ N.	5	bem	...	29.978	65.8	63.8	88	64.7	7	Cir.	Cum.	
4.	w $\frac{1}{2}$ N.	4	be	...	29.985	66.0	63.8	87	...	6	Cir.	Cum.	
6.	w $\frac{1}{2}$ N.	5	em	...	29.995	64.3	62.8	91	64.0	10	...	Cum.	
8.	w $\frac{1}{2}$ N.	3	bepd	...	29.992	63.3	60.8	85	64.0	8	...	Cum.	
10.	w $\frac{1}{2}$ N.	4	cpm	3	30.049	62.8	60.8	88	63.0	9	...	Cum.	
Midt.	w $\frac{1}{2}$ N.	4	e	2	30.051	62.8	60.8	88	62.5	9	...	Cum.	
Totals.	...	50	emul	5	11929	42.8	22.5	119	46.9	99	Cir.	Cum. & Str.	
Mean.	wb $\frac{1}{2}$ N.	4		2	29.994	63.6	61.9	90	64.3	8			

## SATURDAY, 10TH.

2.	w <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	4	bem	...	30.047	61.8	60.8	94	63.0	6	Cir.	Cum.	At noon, lat. 37° 35' N. long. 163° 35' W. Temperature by self-registering thermo- meter, max. 70°, min. 60° 5. Current w. 5'. Sp. gr. 1.02528.
4.	sw <sup>b</sup> w <sup>1</sup> / <sub>2</sub> W.	4	bem	...	30.049	61.8	60.8	94	63.0	6	Cir.	Cum.	
6.	w <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	4	be	...	30.093	62.0	60.8	93	64.0	9	...	Cum.	
8.	w <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	3	be	...	30.107	63.3	61.8	91	64.2	9	...	Cum.	
10.	w <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	2	be	...	30.138	64.5	62.8	95	64.2	5	Cir.	Cum.	
Noon.	w <sup>b</sup> N <sup>1</sup> / <sub>2</sub> N.	2	be	...	30.132	66.3	63.8	85	64.2	8	...	Cum.	
2.	w <sup>b</sup> s.	3	o	...	30.130	66.8	63.8	83	65.0	10	...	Str.	
4.	s. w.	2	bemp	...	30.126	67.3	64.8	85	65.0	8	...	Cm.&Str.	
6.	sw <sup>1</sup> / <sub>2</sub> s.	2	be	...	30.140	67.5	64.8	84	65.2	2	...	Cm.&Str.	
8.	sw <sup>1</sup> / <sub>2</sub> w.	1	b	...	30.158	65.3	63.3	88	65.2	0	...	...	
10.	sw <sup>1</sup> / <sub>2</sub> s.	2	b	...	30.196	64.8	62.8	88	64.7	0	...	...	
Midt.	sw <sup>1</sup> / <sub>2</sub> w.	3	h	...	30.209	64.8	62.8	88	64.5	0	...	...	
Totals.	...	32	...	...	1525	56.2	33.1	108	52.2	63	Cir.	Cum. & Str.	
Mean.	w <sup>b</sup> s.	3	bemp	...	30.127	64.7	62.8	89	64.4	5			

## SUNDAY 11TH.

2.	$s^{bw}\frac{1}{2}W.$	2	b	...	30.179	63.8	62.8	94	64.5	0	...	...	At noon, lat. 37° 42' N. long. 161° 28' W. Temperature by self-registering thermometer, max. 67° 5, min. 63° 0. Current, N. 42° E. 7'. Black bulls, 119° 5. Sp. gr. 1.02535. Numerous small physalia.
4.	$s^{bw}\frac{1}{2}W.$	3	b	...	30.181	64.3	62.8	91	64.5	0	...	...	
6.	$s^{bw}\frac{1}{2}W.$	2	be	...	30.214	64.5	62.8	89	64.7	2	Cir.	Cir cum.	
8.	$s^{bw}\frac{1}{2}W.$	3	be	...	30.261	64.5	62.8	89	64.0	1	Cir str.	...	
10.	$s\frac{1}{2}W.$	2	be	...	30.271	64.8	63.3	91	64.2	1	...	Cm.&Str.	
Noon.	s.	3	be	...	30.271	66.5	64.5	88	64.7	1	...	Cm.&Str.	
2.	$s\frac{1}{2}W.$	2	be	...	30.272	66.3	63.8	85	64.7	1	Cir cum.	...	
4.	$s^{bw}\frac{1}{2}E.$	2	be	...	30.257	66.3	63.8	85	64.5	1	Cir cum.	Cm.&Str.	
6.	$s^{bw}\frac{1}{2}W.$	2	be	...	30.269	66.3	63.8	85	65.2	1	Cir.	Str.	
8.	$s^{bw}\frac{1}{2}W.$	1	be	...	30.276	65.3	63.5	89	65.5	1	Cir.	Str.	
10.	$s\frac{1}{2}E.$	1	bw	...	30.308	64.8	63.0	89	64.7	0	...	...	
Midt.	$s\frac{1}{2}W.$	1	bw	...	30.315	64.5	63.0	91	64.7	0	...	...	
Totals.	...	24	...	...	3074	61.9	39.9	106	55.9	9	Cir.	Cum. & Str.	
Mean.	$s^{bw}$ .	2	...	...	30.256	65.2	63.3	89	64.7	1			

## MONDAY, 12TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Chills, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w.	1	bc	...	30.314	64.3	62.8	91	64.7	2	...	Str.&Cumst.	At noon, lat. 37° 52' N. long. 160° 17' W. Temperature by self-registering thermo- meter, max. 71.5, min. 63° 0. Current, s. 43° E. 14'. Black bulb 121½°. Sp. gr. 1.02540. Upper clouds from E.S.E.
4.	s.w.	1	c	...	30.320	64.3	62.8	91	64.7	10	...	Cum str.	
6.	s.w.	1	c	...	30.331	64.8	61.3	81	65.0	8	...	Cum.	
8.	s.w.	1	bc	...	30.347	64.8	61.0	79	65.0	9	...	Cum.	
10.	s.w.	2	bc	...	30.353	65.0	60.8	77	65.0	9	...	Cum.	
Noon.	s.w.	1	bc	...	30.347	67.5	61.8	69	65.0	4	...	Cir.	
2.	s.w.	1	bc	...	30.337	70.3	63.8	67	66.0	3	...	Cir.	
4.	s.w.	0	bc	...	30.313	70.8	63.8	65	66.5	5	...	Cir.	
6.	s.e.½ E.	1	bc	...	30.334	68.8	64.0	74	66.5	2	...	Cir.	
8.	s.e.½ E.	2	bc	...	30.354	66.3	61.8	75	66.5	7	...	Cum.	
10.	E.½ S.	1	bc	...	30.347	66.0	62.5	81	65.7	9	...	Cum.	
Midd.	s.e.½ S.	2	bc	...	30.343	66.0	62.0	78	65.7	9	...	Cum.	
Totals.	...	14	bc	...	4040	78.9	28.4	928	66.3	77	Cir.	Cum. & Str.	
Mean.	s.w.	1		...	30.337	66.6	62.4	77	65.5	6			

## TUESDAY, 13TH.

2.	s.e.½ E.	3	bc	...	30.323	65.3	59.8	71	65.2	7	...	Cum.	At noon, lat. 37° 55' N. long. 158° 23' W. Temperature by self-registering thermo- meter, max. 68.7, min. 62° 0. Current, s. 76° E. 11'. Sp. gr. 1.02527. 9.30 P.M., observed a lunar rainbow.
4.	s.e.½ E.	3	c	...	30.309	64.8	59.3	70	65.0	10	...	Cum.	
6.	s.e.½ E.	3	c	...	30.306	64.8	61.3	81	66.0	10	...	Cum.	
8.	s.e.½ E.	1	cp	...	30.335	63.8	60.8	82	66.0	10	...	Cum.	
10.	s.e.½ E.	2	c	...	30.335	65.8	61.8	78	66.0	10	...	Cum str.	
Noon.	s.e.½ E.	2	cud	...	30.324	64.8	62.8	88	66.2	10	...	Cum str.	
2.	Variable.	1	bc	...	30.307	67.8	62.8	78	67.0	9	...	Str.	
4.	s.e.½ E.	2	bc	...	30.290	66.5	62.5	78	66.7	9	...	Str.	
6.	s.e.½ E.	2	bc	...	30.281	66.3	62.8	81	66.7	7	...	Str.	
8.	s.e.½ E.	2	bc	...	30.311	64.8	62.8	85	66.0	5	...	Str.	
10.	s.e.½ E.	2	cpd	...	30.311	64.8	62.8	88	66.2	10	...	Cir.	S. & Cum str. Cum. & Nl. Cum str.
Midd.	E.½ S.	1	c	...	30.280	65.8	64.8	94	67.0	10	...	Cum str.	
Totals.	...	23	cpd	...	3411	65.8	25.3	974	62.0	107	Cir.	Cum., Str., & Cum str.	
Mean.	s.e.½ E.	2		...	30.310	65.5	62.1	81	66.2	9			

## WEDNESDAY, 14TH.

2.	s.e.½ S.	1	cpd	...	30.268	66.8	65.8	94	67.5	10	...	Cum.	At noon, lat. 38° 9' N. long. 156° 25' W. Temperature by self-registering thermo- meter, max. 73° 2, min. 63° 5. Current, s. 11'. Black bulb 117°. Sp. gr. 1.02540.
4.	s.e.½ S.	2	bcp	...	30.269	67.0	66.0	94	67.7	8	...	Cum.	
6.	s.	1	bc	...	30.293	67.5	66.8	96	67.7	3	...	Cum.	
8.	s.w.	2	bc	...	30.316	70.3	67.5	84	67.7	3	...	Cir cum.	
10.	s.s.e.	2	bc	...	30.313	69.3	66.8	85	67.7	3	...	Cum & Str.	
Noon.	s.w.	3	bc	...	30.315	70.3	67.8	85	68.0	2	...	Cum & Str.	
2.	s.e.½ E.	2	b	...	30.320	70.3	67.8	85	68.0	0	...	Cum.	
4.	s.e.½ E.	2	bc	...	30.301	71.3	68.8	85	68.0	1	...	Cum.	
6.	s.e.½ E.	2	bc	...	30.308	70.5	68.3	87	68.5	1	...	Cir str.	
8.	s.e.½ E.	2	b	...	30.317	68.8	66.8	88	68.0	0	...	...	
10.	s.e.½ E.	3	b	...	30.344	68.8	67.3	91	68.5	0	...	...	
Midd.	s.e.½ E.	2	bc	...	30.342	69.3	67.0	87	68.5	1	...	Cir.	
Totals.	...	24	bcpd	...	3706	110.2	86.7	101	95.8	32	Cir.	Cum. & Str.	
Mean.	s.e.½ E.	2		...	30.309	69.2	67.2	88	68.0	3			

## THURSDAY, 15th JULY 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to Sea Level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SSE E.	1	bc	...	30.322	69.3	66.8	85	68.5	1	Cir cum.	...	At noon, lat. 37° 29' N. long. 155° 17' W. Temperature by self-registering thermometer, max. 72° 22' min. 67° 5. Current, S. 71° E. 9'. Black bulb 122°.
4.	SSE E.	2	bc	...	30.311	69.3	67.3	88	68.5	9	...	Cum.	
6.	SSE E.	2	bc	...	30.343	69.8	67.3	85	68.5	8	...	Cum.	
8.	SSE E.	2	bc	...	30.364	71.0	67.8	82	69.0	7	Cir cum.	Cum.	
10.	SE S.	2	bc	...	30.375	70.8	66.8	78	69.0	7	Cir cum.	Cum.	
Noon.	SE S.	3	bc	...	30.390	70.8	66.8	78	69.2	1	Cir cum.	...	
2.	SE S.	2	bc	12.42	30.386	69.8	66.3	80	69.5	1	...	Cum. & Str.	
4.	SE S.	2	bc	...	30.382	70.3	66.3	78	69.5	1	...	Cum. & Str.	
6.	SE S.	2	bc	...	30.380	69.5	64.8	74	69.5	1	...	Str.	
8.	SE S.	2	bc	...	30.380	68.8	65.5	82	69.7	1	Cir str.	...	
10.	SE S.	1	b	...	30.393	68.3	65.5	84	69.0	0	...	...	
Midt.	S. S. E.	1	b	...	30.373	68.0	64.8	82	69.0	0	...	...	
Totals.	...	22	bc	4	4599	115.7	76.0	16	9	37	Cir cum.	Cum. & Str.	
Mean.	SE S.	2		2	30.367	69.6	66.3	81	69.1	3			

## FRIDAY, 16th.

2.	Variable.	0	bc	0	30.380	67.8	64.8	83	69.0	1	Cir.	...	At noon, lat. 36° 58' N. long. 154° 52' W. Temperature by self-registering thermometer, max. 73° 5, min. 66° 0. Current, S. 38°, E. 4'. Black bulb 125° S. E. swell. Numerous birds seen and one flying fish. Sp. gr. 1.02510.
4.	Caln.	0	bc	0	30.386	67.8	64.3	81	69.0	2	Cum.	Cum.	
6.	Caln.	0	bc	...	30.414	68.8	65.8	83	69.0	1	Cir.	Cum.	
8.	slw.	1	bc	...	30.424	69.5	65.3	77	...	2	Cir.	...	
10.	slw.	1	bc	0	30.424	69.5	65.8	78	71.0	1	Cir str.	...	
Noon.	SSE E.	2	bc	0	30.425	72.5	66.8	71	72.0	1	Cir str.	...	
2.	SE E.	1	bc	...	30.409	70.8	64.8	69	72.0	1	...	Cum.	
4.	SE E.	1	bc	...	30.396	70.8	64.8	69	72.0	1	...	Cum.	
6.	SE E.	2	bc	...	30.389	71.8	65.8	69	72.0	2	...	Cum.	
8.	SSE E.	1	bc	1	30.389	70.8	66.3	75	71.0	3	...	Cum.	
10.	ESE S.	2	bc	...	30.414	70.5	66.5	78	70.7	4	Cir.	Cum.	
Midt.	SE E.	3	bc	...	30.409	70.3	66.3	78	70.7	5	Cir.	Cum.	
Totals.	...	14	bc	...	4859	1.2	67.3	911	8.4	24	Cir. & Cir str.	Cum.	
Mean.	S. E.	1		0	30.405	70.1	65.6	76	70.8	2			

## SATURDAY, 17th.

2.	ESE S.	2	bc	...	30.399	69.8	66.3	80	71.0	7	Cir.	Cum.	At noon, lat. 35° 13' N. long. 154° 43' W. Temperature by self-registering thermometer, max. 75°, min. 67° 5. Current, S. 28° W. 3'. Black bulb 127°. Easterly swell. Sp. gr. 1.02576.
4.	ESE S.	2	bc	...	30.389	69.8	66.8	83	70.7	8	...	Cum.	
6.	Variable.	1	bc	2	30.396	69.8	66.3	80	71.2	6	...	Cum.	
8.	NSE E.	2	bc	2	30.397	70.8	66.8	78	72.0	5	...	Cum.	
10.	ESE S.	2	bc	1	30.396	72.8	67.8	74	72.0	3	...	Cum.	
Noon.	ESE S.	2	bc	2	30.400	73.8	67.8	70	72.0	4	...	Cum.	
2.	ESE S.	2	bc	...	30.400	73.8	67.8	70	72.0	3	Cir.	Cum.	
4.	ESE S.	1	bc	...	30.384	73.5	68.0	72	...	3	Cir.	Cum.	
6.	ESE S.	2	bc	...	30.359	73.3	68.3	74	72.2	4	...	Cum.	
8.	ESE S.	2	bc	...	30.362	71.8	67.3	77	73.0	7	...	Cum.	
10.	ESE S.	2	bcp	...	30.364	70.8	67.8	83	72.7	9	...	St. & Cum.	
Midt.	ESE S.	1	bc	...	30.344	70.8	66.3	75	72.2	7	...	Cum. & Cum. st.	
Totals.	...	21	bcp	7	4590	20.8	87.3	916	21.0	66	Cir.	Cum.	
Mean.	E.	2		2	30.383	71.7	67.3	76	71.9	5			

## SUNDAY, 18TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Variable.	0	bc	...	30.323	70.8	66.5	82	72.5	8	...	Cum.&Str.	At noon, lat. 34° 46' N. long. 154° 59' W. Temperature by self-registering thermo- meter, max. 76°, min. 68° 5. Current, w. 14'.  Black bulb 130°. Observed a few flying fish. Sp. gr. 1.02573. 7.15 P.M., observed a brilliant meteor to sea's.
4.	sse½E.	1	bc	...	30.303	70.5	66.3	77	72.0	4	Cir.	Cum.	
6.	s½E.	0	bc	...	30.321	71.0	66.8	77	72.0	3	Cir str.	Cum.	
8.	Variable.	1	bc	...	30.320	71.8	66.8	74	72.0	5	Cir cum.	Cum.&Cum.st	
10.	w½s.	0	bc	2	30.318	70.8	66.8	78	72.2	5	...	Cum.&Str.	
Noon.	w½s.	1	bc	2	30.308	74.3	68.3	70	74.0	8	...	Cum.	
2.	s½w½w.	0	bc	...	30.291	74.8	67.8	66	75.7	4	...	Cum.	
4.	s½E.	1	bc	...	30.259	75.8	67.8	63	75.5	2	...	Cum.	
6.	Calm.	0	bc	...	30.249	75.3	67.8	64	76.0	2	...	Cum.	
8.	sse½E.	1	bc	...	30.248	72.8	66.3	68	74.0	3	...	Cum.	
10.	s½w½w.	1	bc	...	30.268	72.0	66.0	69	74.0	2	...	Cum.	
Midt.	s½w½w.	1	bc	...	30.256	71.8	66.3	71	74.0	2	...	Cum.	
Totals.	...	7	bc	4	3464	31.7	83.5	859	43.9	48	Cir str.	Cum. & Str.	
Mean.	s½w½w.	1		2	30.289	72.6	66.9	72	73.7	4			

## MONDAY, 19TH.

2.	s½E.	0	bc	...	30.239	71.3	66.8	76	73.7	2	...	Cum.	At noon, lat. 32° 35' N. long. 154° 36' W. Temperature by self-registering thermo- meter, max. 76° 5, min. 69° 0. Current, s. 5° E. 19'.  Black bulb 125°. Swell from the E.S.E. Sp. gr. 1.02618.
4.	s½E.	1	bc	...	30.229	70.8	66.3	75	73.5	2	...	Cum.	
6.	s½E.	1	bc	...	30.252	70.8	66.8	78	73.5	3	...	Cum.&Str.	
8.	s½E.	0	bc	...	30.254	72.8	67.8	74	73.5	2	...	Cum.&Str.	
10.	s½E.	1	bc	...	30.251	75.3	68.5	67	74.0	2	...	Cum.	
Noon.	s.s.e.	1	bc	...	30.229	75.8	68.8	67	75.0	1	...	Cum.	
2.	E.S.	1	bc	1	30.227	75.0	67.8	65	74.0	1	...	Cum.	
4.	E.S.	1	bc	1	30.214	74.8	68.3	68	73.7	1	...	Cum.	
6.	sse½E.	1	bc	...	30.195	74.3	67.8	68	75.5	1	...	Cum.	
8.	sse½E.	1	bc	...	30.203	72.8	67.8	74	74.2	1	...	Cum.&Str.	
10.	sse½E.	2	bc	...	30.183	72.5	67.8	75	74.2	3	...	Cum.	
Midt.	s.s.e.	1	bc	...	30.212	72.3	68.3	79	73.7	3	...	Cum.	
Totals.	...	11	bc	2	2688	38.5	92.8	26	48.5	22	...	Cum.&Str.	
Mean.	sE½s.	1		1	30.224	73.2	67.7	72	74.0	2			

## TUESDAY, 20TH.

2.	sse½E.	1	bc	...	30.195	71.8	67.8	79	74.0	3	...	Cum.	At noon, lat. 30° 51' N. long. 154° 23' W. Temperature by self-registering thermo- meter, max. 76° 5, min. 70° 0. Current, s. 16° E. 6'. Black bulb 128°. Sp. gr. 1.02634.
4.	sse½E.	0	bc	...	30.187	71.8	67.8	79	74.0	5	...	Cum.	
6.	ph½s.	1	bc	...	30.193	72.3	68.8	81	74.0	3	...	Cum.	
8.	sse½E.	1	bc	...	30.202	72.8	69.5	83	73.7	4	...	Cum.	
10.	s½w.	1	bc	1	30.212	75.5	70.3	73	74.7	5	Cir.	Cum.	
Noon.	s½E.	3	bc	1	30.179	75.5	69.8	71	75.0	4	Cir.	Cum.	
2.	s½E.	2	bc	...	30.181	75.8	69.8	71	75.5	7	...	Cum.	
4.	s½E.	2	bc	...	30.158	74.5	69.5	74	75.2	6	Cir cum.	Cum.	
6.	s.e.	1	bc	...	30.156	75.8	69.3	69	75.0	2	Cir str.	Cum.	
8.	s.e.	1	bc	...	30.179	73.8	68.8	74	75.0	3	Cir cum.	Cum.	
10.	Variable.	1	bc	...	30.186	73.5	68.8	75	74.2	3	Cir.	Cum.	
Midt.	se½E.	1	bc	...	30.184	73.5	69.0	77	74.2	2	Cir.	Cum.	
Totals.	...	15	bc	2	2212	46.6	109.2	66	54.5	47	Cir.	Cum.	
Mean.	sse½E.	1		1	30.184	73.9	69.1	75	74.5	4			

## WEDNESDAY, 21st JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE $\frac{1}{2}$ E.	3	bcp	...	30.181	71.3	68.5	84	74.5	7	...	Cum.	At noon, lat. 30° 22' N. long. 154° 56' W. Temperature by self-registering thermo- meter, max. 77° 5, min. 71° 0. Current, N. 62° W 11'. 9.30 A.M., observed a waterspout to W. Sp. gr. 1.02644.
4.	SE $\frac{1}{2}$ E.	1	bc	...	30.148	71.8	68.8	84	74.0	5	Cir str.	Cum.	
6.	SE $\frac{1}{2}$ S.	2	bc	...	30.166	72.8	68.8	79	74.0	3	...	Cum.	
8.	SE $\frac{1}{2}$ S.	2	bc	...	30.199	74.8	69.8	74	74.0	5	...	Cum.	
10.	SE $\frac{1}{2}$ W.	1	bc	...	30.207	76.3	70.3	71	75.0	7	Cir str.	Cum.	
Noon.	SE $\frac{1}{2}$ W.	2	bc	1	30.201	76.8	70.8	71	75.2	8	...	Cum.	
2.	SE $\frac{1}{2}$ W.	1	bc	...	30.186	76.8	70.8	71	75.7	7	Cir.	Cum.	
4.	SE $\frac{1}{2}$ S.	2	bc	...	30.175	75.0	70.8	78	75.5	6	Cir.	Cum.	
6.	SE $\frac{1}{2}$ E.	1	bc	...	30.197	75.8	70.8	75	75.2	6	Cir.	Cum.	
8.	SE $\frac{1}{2}$ E.	1	bc	...	30.210	74.8	69.8	74	74.7	7	Cir str.	Cum.&Nb.	
10.	SE $\frac{1}{2}$ S.	2	bc	...	30.226	73.8	69.8	79	75.2	4	...	Cum.&Cumst	Cum.&Cumst Cum.&Str.
Midt.	SE $\frac{1}{2}$ E.	2	bc	...	30.208	73.8	69.8	79	75.0	6	...	...	
Totals.	...	20		...	2304	53.8	118.8	79	58.0	71			
Mean.	S.S.E.	2	bcp	1	30.192	74.5	69.9	77	74.8	6	Cir str.	Cum.	

## THURSDAY, 22d.

2.	SE $\frac{1}{2}$ S.	2	bc	...	30.190	73.8	68.8	74	75.0	5	Cir.	Cum.	At noon, lat. 29° 1' N. long. 154° 43' W. Temperature by self-registering thermo- meter, max. 78°, min. 71° 5. Current, S. 40° W. 3'. Black bulb 135°.
4.	SE $\frac{1}{2}$ S.	2	bc	...	30.189	73.3	68.3	74	75.0	5	...	Cum.	
6.	SE $\frac{1}{2}$ S.	1	bc	...	30.227	73.8	68.8	74	75.0	2	...	Cum.	
8.	SE $\frac{1}{2}$ S.	2	bc	...	30.238	74.8	69.3	72	75.2	2	Cir cum.	Cum.&Str.	
10.	E.S.E.	2	bc	...	30.246	76.8	70.5	70	75.2	3	...	Cum.&Str.	
Noon.	E.S.E.	2	bc	...	30.244	77.0	70.5	69	75.5	3	...	Cum.&Str.	
2.	E.S.E.	2	bc	...	30.241	74.8	70.3	77	75.7	3	...	Cum.	
4.	E.S.E.	3	bc	...	30.232	74.8	69.8	74	75.5	4	...	Cum.	
6.	E.S.E.	2	bc	...	30.215	75.0	69.8	73	75.5	3	...	Cum.&Cumst	
8.	E.S.E.	3	bcp	...	30.241	73.8	68.8	74	75.2	3	...	Cum.&Cumst	A few albatross and one boatswain bird seen. Sp. gr. 1.02630.
10.	E.S.E.	2	bc	...	30.258	73.8	68.3	72	75.2	3	...	Cum.	
Midt.	E.S.E.	3	bc	...	30.252	73.8	68.3	72	75.5	3	...	Cum.	
Totals.	...	26		...	2773	55.5	111.5	35	63.5	39			
Mean.	SE $\frac{1}{2}$ E.	2	bcp	...	30.231	74.6	69.3	73	75.3	3	Cir.	Cum., Str., & Cum str.	

## FRIDAY, 23d.

2.	E.S.	3	bc	...	30.217	73.3	67.8	72	75.2	3	...	Cum.	At noon, lat. 27° 33' N. long. 154° 55' W. Temperature by self-registering thermo- meter, max. 77° 7, min. 71° 5. Current, S. 45° W. 15'. Black bulb 131°.
4.	E.S.	2	bc	...	30.217	72.8	67.8	74	75.2	4	...	Cum.	
6.	E.S.	1	bc	...	30.242	72.8	68.8	79	75.5	3	...	Cum.	
8.	E.S.	2	bc	...	30.230	73.8	68.8	74	75.5	3	...	Cum.	
10.	E.S.	3	bcp	...	30.231	74.5	69.8	75	76.0	5	...	Cum.&Cumst	
Noon.	SE $\frac{1}{2}$ E.	1	bc	...	30.227	76.8	69.8	67	76.5	6	Cir cum.	Cum.&Cumst	
2.	E.S.	5	bcp	2	30.209	72.8	69.3	81	76.5	9	...	Cum.&Nb.	
4.	E.S.	2	bc	2	30.195	73.8	69.8	79	76.0	5	...	Cum.&Str.	
6.	E.S.	1	bc	...	30.211	72.3	68.8	81	76.0	8	Str.	Cum.&Cumst	
8.	E.S.	2	bc	...	30.203	72.3	68.8	81	76.0	8	...	Cum.&Nb.	A fine lunar rainbow.
10.	E.S.E.	2	bc	...	30.221	73.3	69.3	79	76.0	6	...	Cum.	
Midt.	E.S.E.	3	bcp	...	30.222	72.8	69.3	81	76.0	4	Cir.	Cum.	
Totals.	...	27		4	2625	41.3	108.1	83	70.4	64			
Mean.	E.S.	2	bcp	2	30.219	73.4	69.0	77	75.9	5	Cir str.	Cum., Cum str., & Nimb.	

## SATURDAY, 24TH JULY 1875.

Hour.	Wind.		Weather.	State of Sky, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>bs</sup> .	4	bcp	2	30.195	72.8	69.8	84	76.0	6	...	Cum.	At noon, lat. 26° 29' N. long. 155° 8' W. Temperature by self-registering thermo- meter, max. 80° 2', min. 70° 5'. Current, s. 61° W. 8'. Black bulb 133°. One turnstone and one boatswain bird seen—no albatross. Sp. gr. 1.02605.
4.	E <sup>bs</sup> .	3	bc	...	30.177	72.8	69.3	81	76.0	7	...	Cum.	
6.	E.	3	bcp	...	30.192	72.8	69.8	84	76.0	5	Cir.	Cm.&Cm.st	
8.	S.E.	1	bcp	...	30.209	74.8	70.8	79	76.0	4	Cir.	Cm.&Str.	
10.	SE <sup>b</sup> E.	2	bc	...	30.210	76.5	72.3	78	76.7	5	Cir.	Cm.&Str.	
Noon.	E.S.E.	2	bc	...	30.207	77.5	72.0	73	77.0	5	Cir.	Cm.&Cm.st	
2.	E.S.E.	2	bc	...	30.177	76.3	71.5	76	76.7	6	Cr.&Cr.cm.	Cum.	
4.	E.S.E.	2	bc	...	30.155	78.8	71.8	67	76.7	7	Cr.&Cr.cm.	Cum.	
6.	E.	2	bc	...	30.158	78.3	71.3	75	77.0	5	Cir cum.	Cum.	
8.	E <sup>bs</sup> .	2	bcp	...	30.177	74.8	70.8	79	76.7	9	...	Cm.&Nb.	
10.	E.S.E.	3	bc	...	30.183	75.5	70.5	74	76.5	7	Cir.	Cm.&Nb.	
Midt.	E.S.E.	2	bc	...	30.177	74.8	70.5	78	76.0	7	Cir cum.	Cm.&Str.	
Totals.	...	28	bcp	...	2217	63.7	10.4	88	77.3	73	Cir. & Cir cum.	Cum., Str., & Nimb.	
Mean.	E <sup>bs</sup> & S.	2		2	30.185	75.3	70.9	77	76.4	6			

## SUNDAY 25TH.

2.	E.S.E.	3	bc	...	30.133	74.8	70.3	77	76.0	7	Cr.&Cr.cm.	Cum.	At noon, lat. 24° 37' N. long. 155° 34' W. Temperature by self-registering thermo- meter, max. 78° 5', min. 73° 5'. Current, w. 15'. A frigate and several boatswain birds seen—numerous flying-fish. Swell from E. Black bulb 134'. Sp. gr. 1.02612.
4.	S.E.	3	bc	...	30.137	74.8	69.8	74	76.0	5	Cir cum.	Cum.	
6.	E.S.E.	3	bc	...	30.157	74.8	70.8	79	76.0	5	Cir.	Cum.	
8.	E.S.E.	4	bc	...	30.184	76.3	71.5	76	76.5	5	Cir.	Cum.	
10.	E.S.E.	3	bcp	2	30.186	76.8	71.8	75	76.5	6	Cir.	Cm.&Str.	
Noon.	E.S.E.	4	bc	...	30.178	78.3	71.3	67	76.8	7	Cir cum.	Cum.	
2.	E.S.E.	3	bc	...	30.136	77.3	71.8	73	76.0	8	...	Cm.&Str.	
4.	E.S.E.	4	bc	...	30.118	76.8	72.8	79	76.0	8	...	Str.&Cm.	
6.	E.S.E.	4	bc	...	30.122	76.8	70.8	63	76.5	6	Cr.&Cr.cm.	Cum.	
8.	E.S.E.	4	bcp	...	30.154	76.3	71.8	77	76.0	7	Cir cum.	Cm.&Str.	
10.	E.S.E.	4	bc	...	30.157	75.8	70.8	75	76.0	6	...	Cum.	
Midt.	SE <sup>b</sup> E.	2	bcp	...	30.148	74.3	70.8	81	...	9	...	Cm.&Nb.	
Totals.	...	42	bcp	...	1810	75.1	14.3	896	2.3	78	Cir. & Cir cum.	Cum. & Str.	
Mean.	E.S.E.	3		2	30.151	76.3	71.2	75	76.2	6			

## MONDAY, 26TH.

2.	E.S.E.	2	bcp	...	30.110	74.5	71.0	81	76.2	10	...	Cm.&Nb.	At noon, lat. 23° 3' N. long. 156° 6' W. Temperature by self-registering thermo- meter, max. 81° 5', min. 72° 5'. Current, s. 73° W. 10'. Two boatswain birds seen. Sp. gr. 1.02584.
4.	SE <sup>b</sup> E.	2	bcp	...	30.111	74.3	71.0	83	76.2	5	...	Cm.&Nb.	
6.	E <sup>bs</sup> & S.	3	bc	...	30.151	75.0	70.0	74	76.2	7	Cr.&Cr.cm.	Str.	
8.	SE <sup>b</sup> S.	2	bc	...	30.143	75.8	71.8	79	76.2	8	Cir cum.	Cm.&Str.	
10.	E <sup>bs</sup> .	3	bc	4	30.150	79.3	71.5	64	76.5	7	Cir cum.	Cm.&Str.	
Noon.	E <sup>bs</sup> .	4	bc	4	30.143	80.0	71.8	62	76.7	6	Cir cum.	Cm.&Str.	
2.	E <sup>bs</sup> .	4	bc	3	30.167	76.8	69.3	65	76.0	5	Cir.	Cum.	
4.	E.S.E.	4	bc	4	30.161	76.8	69.8	67	76.0	5	Cir str.	...	
6.	E.S.E.	3	bc	3	30.096	76.8	70.8	71	76.2	9	Cir str.	...	
8.	E.S.E.	3	bc	...	...	75.8	70.3	73	76.5	9	Cir.	Cum.	
10.	SE <sup>b</sup> E.	4	bc	3	30.140	75.8	70.3	73	76.0	9	Cir.	...	Several meteors observed.
Midt.	SE <sup>b</sup> E.	3	bcm	3	30.138	75.3	69.8	72	77.0	2	...	Cum.	
Totals.	...	37	bcp	24	1390	76.2	7.4	24	37	58	Cir cum.	Cum., Str., & Nimb.	
Mean.	E.S.E.	3		3	30.126	76.4	70.6	72	76.3	5			

## TUESDAY, 27th JULY 1875.

Hour.	Wind.		Weather.	State of Sea.	Harbour reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>b</sup> E.	4	bc	3	30-088	74.8	69.8	74	77.0	1	...	Cum.	At noon, lat. 21° 9' N. long. 157° 32' W. Temperature by self-registering thermometer, max. 82°, min. 73° 7'.
4.	SE <sup>b</sup> E.	3	b	...	30-089	74.8	68.8	70	76.7	0	...	...	
6.	E.S.E.	4	bc	...	30-104	75.3	69.3	70	76.7	2	...	Cum.	
8.	E.S.E.	3	bc	...	30-111	76.8	70.3	69	76.0	3	...	Cir cum.	
10.	NE <sup>b</sup> E.	3	bc	...	30-103	77.8	69.8	63	76.7	2	...	Cir.	Sp. gr. 1.02575.
Noon.	NE <sup>b</sup> E.	3	bc	...	30-085	77.8	70.5	66	76.5	3	...	Cir.	
2.	NE <sup>b</sup> E.	4	bc	...	30-055	78.3	70.5	64	76.7	3	...	Cir.	
4.	NE <sup>b</sup> E.	3	bc	...	30-035	80.3	71.8	62	...	3	...	Cum.	
6.	NE <sup>b</sup> E.	2	bc	...	30-045	78.8	71.8	67	79.0	3	Cir str.	Cum.	Arrived and moored at Honolulua harbour.
8.	NE <sup>b</sup> E.	1	bc	...	30-071	76.8	69.8	67	...	2	...	Cum.	
10.	NE <sup>b</sup> E.	3	bc	...	30-081	75.8	69.8	71	...	2	...	Cum.	
Midd.	NE <sup>b</sup> E.	1	bc	...	30-078	75.0	69.5	72	...	2	...	Cum.	
Totals.	...	34	bc	...	945	82.3	1.7	95	55.3	26	...	...	
Mean.	E <sup>b</sup> N.	3		3	30-079	76.9	70.1	68	76.9	2	Cir.	Cum.	

## WEDNESDAY, 28th.

2.	SE <sup>b</sup> E.	2	bc	...	30-057	74.8	68.8	70	...	2	...	Cum.	At Honolulua. Temperature by self-registering thermometer, max. 82° 5', min. 72° 5'.
4.	NE <sup>b</sup> E.	1	bc	...	30-032	74.5	68.8	71	...	4	...	Cum.	
6.	NE <sup>b</sup> E.	1	bc	...	30-048	74.5	68.8	71	77.0	6	...	Cum.	
8.	NE <sup>b</sup> E.	1	bcp	...	30-060	76.5	70.5	71	...	6	...	Cum. & Str.	
10.	NE <sup>b</sup> E.	1	bc	...	30-059	78.3	71.3	67	...	6	...	Cum. & Str.	...
Noon.	NE <sup>b</sup> E.	1	bc	...	30-043	79.8	70.3	58	...	7	Cir.	Cum. & Str.	
2.	NE <sup>b</sup> E.	3	bc	...	30-006	80.3	71.0	58	...	5	...	Cum.	
4.	NE <sup>b</sup> E.	1	bc	...	29-986	80.8	71.0	57	...	4	...	Cum.	
6.	NE <sup>b</sup> E.	2	bc	...	29-988	79.8	70.8	59	78.2	6	Cir.	Cum.	...
8.	NE <sup>b</sup> E.	1	bc	...	29-983	77.0	70.3	68	...	3	...	Cum.	
10.	NE <sup>b</sup> E.	1	bc	...	30-002	75.8	68.8	67	...	3	...	Cum.	
Midd.	NE <sup>b</sup> E.	1	bc	...	30-002	74.8	68.8	70	...	2	...	Cum.	
Totals.	...	16	bcp	...	266	86.9	119.2	787	15.2	54	...	...	
Mean.	NE <sup>b</sup> E.	1		...	30-022	77.2	69.9	66	77.6	4	Cir.	Cum. & Str.	

## THURSDAY, 29th.

2.	NE <sup>b</sup> E.	1	bc	...	29-953	73.8	68.8	74	...	2	...	Cum.	At Honolulua. Temperature by self-registering thermometer, max. 82°, min. 71° 2'.
4.	NE <sup>b</sup> E.	1	bc	...	29-946	73.3	68.3	74	...	3	...	Cum.	
6.	NE <sup>b</sup> E.	1	bc	...	29-971	72.3	67.8	77	77.0	2	Cir.	Cum.	
8.	NE <sup>b</sup> E.	1	bc	...	29-908	75.5	69.8	71	...	2	...	Cum.	
10.	NE <sup>b</sup> E.	1	bc	...	29-997	77.3	69.8	65	...	3	...	Cum.	...
Noon.	N.E.	2	bc	...	29-980	78.3	70.3	63	...	7	Cir str.	Cum.	
2.	NE <sup>b</sup> E.	3	bc	...	29-948	78.3	71.8	69	...	5	...	Cir.	
4.	NE <sup>b</sup> E.	3	bc	...	29-931	78.8	71.3	65	...	6	...	Cir.	
6.	NE <sup>b</sup> E.	1	bc	...	29-947	77.8	70.8	67	78.2	8	Cir cum.	Cum. & Str.	...
8.	NE <sup>b</sup> E.	1	bc	...	29-959	76.3	69.8	69	...	7	...	Cum. & Str.	
10.	NE <sup>b</sup> E.	1	bc	...	30-006	75.8	70.3	73	...	7	...	Str.	
Midd.	E.N.E.	1	bc	...	29-997	75.8	69.8	71	...	4	...	Str.	
Totals.	...	17	bc	...	11633	73.3	118.6	118	...	56	...	...	
Mean.	NE <sup>b</sup> E.	1		...	29-969	76.1	69.9	70	77.6	5	Cir.	Cum. & Str.	

## FRIDAY, 30TH JULY 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 8.	Barometre- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE <sup>b</sup> E.	1	bc	...	30.001	76.0	70.8	74	...	6	...	Str.	At Honolurū. Temperature by self-registering thermo- meter, max. 84°·2, min. 72°·0.
4.	NE <sup>b</sup> E.	1	bc	...	29.998	75.0	70.8	78	...	6	...	Cum.	
6.	Calu.	0	bc	...	30.033	74.8	70.5	78	76.5	8	...	Cm.&Cum.st	
8.	Calu.	0	bc	...	30.016	76.8	73.8	84	...	6	...	Cir.	
10.	SE <sup>b</sup> S.	3	bc	...	30.043	77.8	73.3	77	...	6	...	Cir str.	
Noon.	SE <sup>b</sup> S.	2	bc	...	30.049	78.3	72.8	73	...	7	...	Cir cum.	
2.	N.E.	3	bcq	...	30.017	82.8	73.5	59	...	5	...	Cm.&Cum.st	
4.	NE <sup>b</sup> E.	1	bc	...	30.010	81.5	72.8	61	...	4	...	Cum.	
6.	NE <sup>b</sup> E.	1	bc	...	30.026	79.3	71.8	65	78.5	4	...	Cum.	
8.	NE <sup>b</sup> E.	1	bc	...	30.052	78.3	71.8	69	...	12	...	Cum.	
10.	Calu.	0	bc	...	30.099	76.8	71.0	72	...	3	...	Cm.&Str.	
Midt.	Calu.	0	bc	...	30.102	76.0	70.8	74	...	1	...	Cum.	
Totals.	...	13	bcq	...	1446	93.4	23.7	864	...	58	...	Cum., Str., & Cum str.	
Mean.	ENE.	1		...	30.037	77.8	72.0	72	77.5	5	...		

## SATURDAY, 31st.

2.	Calu.	0	bc	...	30.091	75.3	70.3	74	...	1	...	Cum.	At Honolurū. Temperature by self-registering thermo- meter, max. 84°·5, min. 73°·5.  Heavy clouds over the land.
4.	Calu.	0	b	...	30.073	74.8	69.8	74	...	0	...	...	
6.	Calu.	0	bc	...	30.084	74.3	70.3	79	78.2	3	...	Cum.	
8.	Calu.	0	bc	...	30.102	79.0	73.5	73	...	3	...	Cir.	
10.	SE <sup>b</sup> E.	2	bc	...	30.110	79.8	73.5	70	...	4	...	Cum.	
Noon.	NE <sup>b</sup> E.	3	bc	...	30.060	81.0	73.5	66	...	5	...	Cum.	
2.	NE <sup>b</sup> E.	4	bcq	...	30.064	82.3	74.3	64	...	4	...	Cum.	
4.	NE <sup>b</sup> E.	2	bc	...	30.034	82.0	74.0	64	...	3	...	Cir.	
6.	E <sup>b</sup> N.	3	bc	...	30.051	79.8	71.8	63	78.0	1	...	Cir.	
8.	E <sup>b</sup> N.	1	bc	...	30.091	78.5	72.0	69	...	1	...	Cum.	
10.	Calu.	0	bc	...	30.106	77.8	71.8	71	...	1	...	Cum.	
Midt.	E <sup>b</sup> N.	1	b	...	30.102	76.8	71.8	75	...	0	...	...	
Totals.	...	16	bcq	...	988	101.4	26.6	2	...	26	...	Cir.	
Mean.	E <sup>b</sup> N.	1		...	30.082	78.4	72.2	70	78.1	2	...	Cum.	

## SUNDAY, 1st August.

2.	Calu.	0	b	...	30.098	76.8	71.8	75	...	0	...	...	At Honolurū. Temperature by self-registering thermo- meter, max. 84°·5, min. 74°·5.  Clouds hanging over the land.
4.	E <sup>b</sup> N.	1	bc	...	30.094	76.3	71.3	75	...	2	...	Cum.	
6.	NE <sup>b</sup> E.	0	bc	...	30.087	75.8	71.5	78	78.2	2	...	Cir cum.	
8.	E <sup>b</sup> N.	1	bc	...	30.096	79.3	72.3	67	...	2	...	Cum.	
10.	E <sup>b</sup> N.	2	bc	...	30.092	79.5	72.3	66	...	5	...	Cum.	
Noon.	E <sup>b</sup> N.	3	bc	...	30.075	81.3	73.3	64	...	4	...	Str.	
2.	NE <sup>b</sup> E.	4	bc	...	30.039	82.3	73.8	62	...	4	...	Cir.	
4.	NE <sup>b</sup> E.	3	bc	...	30.029	80.8	73.8	68	...	7	...	Cum.	
6.	E <sup>b</sup> N.	2	bc	...	30.037	78.3	71.8	69	80.2	6	...	Cm.&Str.	
8.	E <sup>b</sup> N.	2	bc	...	30.060	76.8	70.8	71	...	4	...	Cm.&Cum.st	
10.	E <sup>b</sup> N.	1	bc	...	30.079	76.8	71.3	73	...	4	...	Cum.	
Midt.	E <sup>b</sup> N.	1	bc	...	30.070	76.3	70.8	73	...	4	...	Cum.	
Totals.	...	20	bc	...	856	100.3	24.8	1	158.4	44	...	Cir.	
Mean.	E <sup>b</sup> N.	2		...	30.071	78.4	72.1	70	79.2	4	...		

## MONDAY, 2D AUGUST 1875.

Hour.	Wind.		Weather.	State of Sky, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	2	bcp	...	30.045	75.8	69.8	71	...	6	...	Cum. & Cum. st	At Honolulu. Temperature by self-registering thermo- meter, max. 84°, min. 74°-5.
4.	E.N.E.	1	cpd	...	30.037	75.8	70.8	75	...	10	...	Cum.	
6.	E.N.	2	cpd	...	30.046	75.8	70.3	73	78.5	8	...	Cum.	
8.	N.E. by E.	4	cpd	...	30.044	75.3	70.8	77	...	10	...	Cum.	
10.	N.E. by E.	2	bcp	...	30.068	70.8	71.3	61	...	6	Cir.	Cum.	
Noon.	N.E. by E.	3	bcp	...	30.065	82.3	71.8	56	...	6	Cir.	Cum.	
2.	N.E. by E.	2	bcp	...	30.030	80.8	71.3	58	...	5	...	Cum.	
4.	N.E. by E.	4	bcp	...	30.060	81.5	71.5	56	...	5	Str.	Cum.	
6.	N.E. by E.	1	bcp	...	30.012	75.8	70.0	72	80.0	8	...	Cum.	
8.	N.E. by E.	2	bcp	...	30.034	74.8	70.3	77	...	8	...	Cum.	
10.	N.E. by E.	1	cpd	...	30.055	74.5	71.3	83	...	10	...	Cum.	
Midd.	N.E. by E.	1	bed	...	30.073	74.0	69.8	78	...	5	...	Cum.	
Totals.	...	25	bcpqd	...	569	86.2	9.0	837	158.5	87	Cir str.	Cum.	
Mean.	N.E. by E.	2		...	30.042	77.2	70.7	69	79.2	7			

## TUESDAY, 3D.

2.	N.E. by E.	2	bcp	...	30.052	73.8	68.8	74	...	4	...	Cum.	At Honolulu. Temperature by self-registering thermo- meter, max. 82°-5, min. 72°-0.
4.	N.E. by E.	1	bcp	...	30.036	73.8	68.8	74	...	4	...	Cum.	
6.	N.E. by E.	1	bc	...	30.046	73.8	69.3	76	78.0	3	Cir cum.	Cum.	
8.	N.E. by E.	1	bcp	...	30.065	74.3	70.5	80	...	7	Cir cum.	Cum.	
10.	N.E. by E.	1	bc	...	30.066	76.0	70.5	73	...	7	Cir cum.	Cum.	
Noon.	N.E. by E.	2	bc	...	30.041	78.3	70.5	64	...	7	Cir.	Cum.	
2.	N.E. by E.	2	bc	...	30.020	80.3	70.8	58	...	6	Cir.	Cum.	
4.	N.E. by E.	2	bc	...	30.016	80.8	70.8	56	...	5	Cir.	Cum.	
6.	N.E. by E.	2	bc	...	30.031	78.3	70.3	63	79.0	3	Cir.	Cum.	
8.	N.E. by E.	1	bc	...	30.051	76.0	68.5	65	...	4	...	Cum.	
10.	N.E. by E.	1	bc	...	30.067	75.8	67.8	63	...	3	...	Cum.	
Midd.	N.E. by E.	1	bc	...	30.075	75.3	67.8	64	...	4	...	Cum.	
Totals.	...	17	bcp	...	566	76.5	114.4	810	...	57	Cir. & Cir cum.	Cum.	
Mean.	N.E. by E.	1		...	30.047	76.4	69.5	67	78.5	5			

## WEDNESDAY, 4TH.

2.	N.E. by E.	0	bc	...	30.068	74.8	68.8	70	...	3	...	Cum.	At Honolulu. Temperature by self-registering thermo- meter, max. 83°, min. 73°.
4.	N.E. by E.	2	bcp	...	30.059	74.3	68.8	72	...	4	...	Cum.	
6.	E.N.	1	bc	...	30.067	74.8	69.5	73	78.0	5	Cir.	Cum.	
8.	N.E. by E.	2	bc	...	30.056	76.3	69.5	68	...	4	...	Cum.	
10.	N.E. by E.	3	bc	...	30.090	78.8	69.5	58	...	4	Cir str.	Cum.	
Noon.	N.E. by E.	4	bc	...	30.078	79.3	68.3	53	...	4	...	Cum.	
2.	N.E. by E.	4	bc	...	30.066	80.8	70.8	56	...	4	Cir.	Cum.	
4.	E.N.	3	bc	...	30.046	81.3	70.8	54	...	4	Cir.	Cum.	
6.	E.N.	1	bc	...	30.046	78.8	69.8	59	78.2	3	Cir.	Cum.	
8.	E.N.	1	bc	...	30.070	76.8	69.8	67	...	2	...	Cum.	
10.	N.E. by E.	1	b	...	30.090	75.8	68.5	66	...	0	...	...	
Midd.	E.N.E.	1	b	...	30.089	75.8	69.8	71	...	0	...	...	
Totals.	...	23	bcp	...	855	87.6	113.9	767	...	37	Cir.	Cum.	
Mean.	E.N.E.	2		...	30.071	77.3	69.5	64	78.1	3			

THURSDAY, 5TH AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	1	b	...	30.071	75.0	68.8	69	...	0	...	...	At Honolulua. Temperature by self-registering thermo- meter, max. 84°.5, min. 73°.7. Heavy cum. over land.
4.	N.E.	1	b	...	30.055	74.8	68.8	70	...	0	...	...	
6.	Calm.	0	bc	...	30.074	73.8	69.8	79	77.7	3	Cir str.	...	
8.	Calm.	0	bc	...	30.091	77.3	70.8	69	...	2	...	Cum.	
10.	E.N.	1	bc	...	30.100	79.3	71.3	63	...	6	Cir.	Cum.	
Noon.	N.E.	2	bc	...	30.095	80.8	71.3	58	...	6	Cir.	Cum.	
2.	E.N.	1	bc	...	30.053	82.8	71.3	53	...	4	Cir str.	...	
4.	E.N.	2	bc	...	30.037	82.3	72.0	56	...	4	Cir str.	...	
6.	E.N.	1	bc	...	30.043	79.8	69.8	56	79.0	3	Cir.	Cum.	
8.	Calm.	0	bc	...	30.078	77.8	70.8	67	...	1	Cir.	...	
10.	E.N.E.	1	bm	...	30.092	76.8	70.8	71	...	0	...	...	
Midd.	E.N.E.	1	bm	...	30.099	76.5	70.8	72	...	0	...	...	
Totals.	...	11	...	...	.888	97.0	6.3	783	16.7	29	Cir. & Cir str.	Cum.	
Mean.	E.N.E.	1	...	...	30.074	78.1	70.5	65	78.3	2			

FRIDAY, 6TH.

2.	Calm.	0	bc	...	30.079	76.3	70.3	71	...	2	...	Cum.	...	At Honolulua. Temperature by self-registering thermo- meter, max. 84°·2, min. 73°·7.
4.	N.E.	1	bc	...	30.070	74.8	69.8	74	...	2	...	Cum.	...	
6.	N.E.	0	bc	...	30.083	75.3	69.8	72	78.0	4	...	Cum.	...	
8.	E.N.	1	bc	...	30.097	77.5	70.5	67	...	4	...	Cum.	...	
10.	E.N.	1	bc	...	30.092	76.0	70.5	73	...	3	...	Cum.	...	
Noon.	E.N.	3	bc	...	30.077	81.3	71.5	57	...	3	...	Cum.	...	
2.	E.N.	1	bc	...	30.048	81.8	72.3	58	...	3	...	Cum.	...	
4.	E.N.	3	bc	...	30.033	81.8	72.3	59	...	3	...	Cum.	...	
6.	E.N.	2	bc	...	30.050	79.8	71.8	63	78.2	2	...	Cum.	...	
8.	N.E.	1	bc	...	30.060	77.8	70.8	67	...	2	...	Cum.	...	
10.	N.E.	1	bc	...	30.118	77.0	70.0	67	...	2	...	Cum.	...	
Midd.	N.E.	2	bcpd	...	30.102	76.3	69.8	69	...	4	...	Cum.	...	
Totals.	...	16	...	...	.909	95.7	9.4	77	...	34	...	Cum.	...	
Mean.	E.N.E.	1	...	...	30.076	78.0	70.8	66	78.1	3	...	...	...	

SATURDAY, 7TH.

2.	N.E.	1	bc	...	30.098	76.3	69.3	67	...	6	...	Cum.	...	At Honolulua. Temperature by self-registering thermo- meter, max. 84°, min. 74°·5.
4.	N.E.	1	bc	...	30.089	75.8	68.8	67	...	4	...	Cum.	...	
6.	E.N.	1	bc	...	30.097	75.5	69.0	68	77.2	4	...	Cum.	...	
8.	E.N.	1	bc	...	30.120	77.8	70.8	67	...	5	...	Cum.	...	
10.	E.N.	2	bc	...	30.116	79.3	70.8	61	...	5	Cir.	Cum.	...	
Noon.	E.N.	3	bc	...	30.092	81.0	71.0	56	...	4	Cir.	Cum.	...	
2.	N.E.	1	bc	...	30.067	82.8	71.3	53	...	3	...	Cum.	...	
4.	N.E.	3	bc	...	30.047	82.3	72.8	59	...	4	...	Cum.	...	
6.	N.E.	1	bc	...	30.053	80.0	70.5	58	79.0	5	...	Cum. & Cm. st.	...	
8.	E.N.E.	2	bc	...	30.097	77.8	70.3	65	...	6	...	Cum.	...	
10.	N.E.	1	bc	...	30.115	77.3	69.8	65	...	6	...	Cum.	...	
Midd.	N.E.	2	bc	...	30.116	76.8	70.3	69	...	7	...	Cum.	...	
Totals.	...	19	...	...	.1107	102.7	4.7	35	16.2	59	Cir.	Cum.	...	
Mean.	E.N.E.	2	...	...	30.092	78.6	70.4	63	78.1	5	...	...	...	

## SUNDAY, 8TH AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.			Humidity.	Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.						Upper.	Lower.	
2.	SE <sup>by</sup> E.	1	bc	...	30.082	76.8	69.8	67	...	...	4	...	...	Cum.	At Honolulu. Temperature by self-registering thermometer, max. 84°, min. 74° 5.
4.	SE <sup>by</sup> E.	4	bc	...	30.084	76.8	70.8	71	...	...	7	...	...	Cum.	
6.	E <sup>by</sup> N.	1	bcp	...	30.097	75.8	70.3	73	77.2	...	6	Cir.	...	Cum.	
8.	SE <sup>by</sup> E.	1	bcp	...	30.121	76.8	71.8	75	...	...	7	...	...	Cum.	
10.	SE <sup>by</sup> E.	1	bc	...	30.121	78.8	71.3	65	...	...	6	Cir.	...	Cum.	
Noon.	E <sup>by</sup> N.	2	bc	...	30.105	79.8	72.8	67	...	...	8	...	...	Cum.	
2.	E <sup>by</sup> N.	1	bc	...	30.067	81.5	72.8	61	...	...	4	...	...	Cm. & Str.	
4.	E <sup>by</sup> N.	2	bc	...	30.047	82.3	72.8	59	...	...	3	...	...	Cum.	
6.	E <sup>by</sup> N.	1	bc	...	30.036	80.8	73.3	66	79.0	...	4	Cir.	...	Cum.	
8.	E <sup>by</sup> N.	1	bc	...	30.073	78.3	71.8	69	...	...	7	...	...	Cum.	
10.	E <sup>by</sup> N.	1	bc	...	30.080	78.3	70.8	65	...	...	7	...	...	Cum.	
Midt.	SE <sup>by</sup> E.	1	bc	...	30.079	77.5	71.0	69	...	...	3	...	...	Cum.	
Totals.	...	17	bcp	...	.992	103.5	19.3	87	16.2	66	...	...	...	...	
Mean.	E. N. E.	1		...	30.083	78.6	71.6	67	78.1	5	...	...	Cir.	Cum.	

## MONDAY, 9TH.

2.	E <sup>by</sup> N.	1	bc	...	30.059	76.8	70.8	71	...	...	2	...	...	Cum.	At Honolulu. Temperature by self-registering thermometer, max. 84° 5, min. 74° 0.
4.	Calm.	0	bc	...	30.048	77.3	71.3	71	...	...	4	...	...	Cum.	
6.	E. N. E.	1	bc	...	30.064	76.3	70.3	71	77.2	...	2	...	...	Str.	
8.	E <sup>by</sup> N.	1	bc	...	30.085	78.3	72.0	70	...	...	2	...	...	Cum.	
10.	SE <sup>by</sup> E.	1	bc	...	30.081	79.5	73.5	71	...	...	3	Cir.	...	Cum.	
Noon.	SE <sup>by</sup> E.	2	bc	...	30.065	81.8	73.8	64	...	...	3	Cir.	...	Cum.	
2.	SE <sup>by</sup> E.	2	bc	...	30.039	83.3	74.8	62	...	...	4	Cir.	...	Cum.	
4.	SE <sup>by</sup> E.	3	bc	...	30.013	81.8	74.3	66	...	...	4	Cir.	...	Cum.	
6.	E. N. E.	0	bc	...	30.025	80.3	73.8	69	79.0	...	8	...	...	Cum.	
8.	E <sup>by</sup> N.	1	bc	...	30.048	79.3	73.3	71	...	...	8	...	...	Cum.	
10.	E <sup>by</sup> N.	1	bc	...	30.062	78.3	71.8	69	...	...	4	...	...	Cum.	
Midt.	E <sup>by</sup> N.	1	bc	...	30.062	77.8	71.3	69	...	...	6	...	...	Cum.	
Totals.	...	14	bc	...	.651	110.8	31.0	104	...	50	...	...	...	...	
Mean.	E. N. E.	1		...	30.054	79.2	72.6	69	78.1	4	...	...	Cir.	Cum.	

## TUESDAY, 10TH.

2.	E <sup>by</sup> N.	1	bc	...	30.053	78.3	71.8	69	...	...	8	...	...	Cum.	At Honolulu. Temperature by self-registering thermometer, max. 84°, min. 76° 5.
4.	Calm.	0	bc	...	30.045	78.3	72.3	71	...	...	6	...	...	Cum.	
6.	SE <sup>by</sup> E.	1	bc	...	30.050	77.8	72.3	73	78.2	...	7	Cir.	...	Cum.	
8.	SE <sup>by</sup> E.	2	bc	...	30.063	81.0	73.8	67	...	...	7	Cir.	...	Cum.	
10.	SE <sup>by</sup> E.	1	bc	...	30.077	81.3	74.3	68	...	...	5	...	...	Str.	
Noon.	E <sup>by</sup> N.	3	bc	...	30.061	81.8	74.3	66	...	...	4	Cir str.	...	Str.	
2.	E <sup>by</sup> N.	1	bc	...	30.045	82.8	74.3	62	...	...	6	Cir str.	...	Cum.	
4.	SE <sup>by</sup> E.	4	bc	...	30.023	81.8	73.3	62	...	...	6	Cir str.	...	Cum.	
6.	E <sup>by</sup> N.	2	bc	...	30.047	79.8	72.8	67	79.7	...	7	Cir str.	...	Str.	
8.	E <sup>by</sup> N.	1	bc	...	30.062	78.3	71.8	69	...	...	4	Cir.	...	Cum.	
10.	E <sup>by</sup> N.	2	bc	...	30.097	77.8	70.8	67	...	...	7	Cir.	...	Cum.	
Midt.	E. N. E.	1	bc	...	30.089	77.8	70.8	67	...	...	5	...	...	Cum.	
Totals.	...	19	bc	...	.712	116.8	32.6	88	17.9	72	...	...	Cir. & Cir str.	Cum. & Str.	
Mean.	E <sup>by</sup> N. & S.	2		...	30.059	79.7	72.7	67	78.9	6	...	...	...	...	

## WEDNESDAY, 11TH AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	12	bc	...	30-070	77.5	70.5	67	...	4	...	Cum.	At noon, lat. 21° 13' N. long. 157° 54' W. Temperature by self-registering thermo- meter, max. 82° 5, min. 76° 5. 9.30 A.M., left Honolulu.
4.	E.N.E.	1	bc	...	30-056	77.3	70.8	69	...	4	...	Cum.	
6.	E <sup>N</sup> .	12	bc	...	30-069	77.0	70.5	69	78.0	6	Cir str.	Cum.	
8.	N.N.E.	1	bc	...	30-108	79.3	70.8	61	...	4	Cir.	Cum.	
10.	E <sup>N</sup> .	3	bc	...	30-105	80.8	72.8	64	...	5	Cir.	Cum.	
Noon.	E <sup>N</sup> .	4	bc	...	30-069	79.5	72.0	65	78.5	3	Cir.	Cum.	
2.	E.	4	bc	...	30-034	79.8	71.5	62	78.2	7	Cir str.	Cum.	
4.	E.N.E.	3	bc	...	30-021	81.0	71.3	57	78.2	5	Cir str.	Cum.	
6.	E.N.E.	4	bc	...	30-038	79.8	71.8	63	78.0	8	Crst. & Cir.	Cum.	
8.	E.N.E.	5	...	...	30-055	77.8	72.3	73	78.0	...	...	...	
10.	NE <sup>E</sup> .	3	hc	...	30-071	76.8	70.8	71	78.0	1	Cir.	...	Sp. gr. 1.02618.  Upper clouds from s.w.
Midt.	NE <sup>E</sup> .	5	bc	...	30-063	76.8	70.8	71	78.0	2	Cir.	...	
Totals.	...	37	bc	...	759	103.4	15.9	72	9	49	Cir. & Cir str.	Cum.	
Mean.	E.N.E.	3		...	30-063	78.6	71.3	66	78.1	4			

## THURSDAY, 12TH.

2.	E.N.E.	5	b	...	30-049	76.8	71.0	72	77.2	0	...	...	At noon, lat. 20° 18' N. long. 157° 14' W. Temperature by self-registering thermo- meter, max. 81°, min. 74° 5. Current, s. 82° W. 14'. Several brilliant meteors observed during the middle watch. Sp. gr. 1.02598.
4.	E.N.E.	3	bc	1	30-047	76.8	71.5	74	77.0	3	...	Cum.	
6.	E <sup>N</sup> .	2	bc	...	30-058	76.3	71.3	75	78.0	2	...	Cum.	
8.	E.	4	bc	...	30-053	77.3	71.8	73	78.2	3	Cir.	Cum.	
10.	E.	3	bc	...	30-069	80.3	72.8	65	78.5	1	Cir.	Cum.	
Noon.	E.	4	bc	...	30-053	78.5	71.8	68	78.5	1	...	Cum.	
2.	E.	5	bcq	3	30-025	79.8	72.8	67	78.7	2	Cir.	Cum.	
4.	E.	4	bc	...	30-009	79.3	72.3	67	78.5	2	Cir.	...	
6.	E <sup>N</sup> .	5	bc	4	29-995	78.5	71.8	68	78.0	2	Cir.	Cum.	
8.	E <sup>N</sup> .	4	b	...	30-010	77.3	72.3	75	78.0	0	...	...	
10.	E <sup>N</sup> .	4	bc	...	30-024	76.8	69.8	67	78.5	3	Cir str.	...	Str. & Cum.
Midt.	E.N.E.	4	bc	...	30-023	76.3	71.3	75	78.2	2	...	...	
Totals.	...	47	bcq	8	415	94.0	20.5	6	1.3	21	Cir.	Cum.	
Mean.	E <sup>N</sup> .	4		3	30-035	77.8	71.7	70	78.1	2			

## FRIDAY, 13TH.

2.	E.N.E.	6	b	6	29-971	76.3	69.8	69	78.0	0	...	...	At noon, lat. 20° 21' N. long. 155° 51' W. Temperature by self-registering thermo- meter, max. 82°, min. 73° 7. 3.40 A.M., zodiacal light very plain. Apex near $\beta$ Tauri. Sp. gr. 1.02593.
4.	E.N.E.	6	b	6	29-981	74.8	70.8	79	78.0	0	...	...	
6.	E.N.E.	6	bc	4	30-016	74.8	69.8	74	78.0	2	...	Cum.	
8.	E.N.E.	6	bc	3	30-004	75.5	70.8	75	78.5	2	Cir str.	...	
10.	NE <sup>E</sup> .	5	bc	3	30-013	78.8	70.8	63	78.7	3	Cir cum.	Cum.	
Noon.	E <sup>N</sup> .	4	bc	2	30-022	79.0	72.3	68	78.0	4	Cir.	Cum.	
2.	E <sup>N</sup> .	4	bc	2	30-000	79.3	72.3	67	77.7	5	Cir str.	Cum.	
4.	E <sup>N</sup> .	3	bc	2	30-011	79.8	71.8	63	77.5	3	Cir.	Cir cum.	
6.	E <sup>N</sup> .	3	bc	...	30-021	77.8	71.3	69	77.5	6	Cir str.	Cum. & Cum	
8.	E.	3	bc	...	30-047	77.0	70.8	70	77.2	6	Cir cum.	Cum.	
10.	E <sup>N</sup> .	2	bc	...	30-052	76.8	70.8	71	77.5	9	...	Cum.	Str. & Cum.
Midt.	E <sup>N</sup> .	1	bc	...	30-050	76.3	70.3	71	77.5	9	...	Cum.	
Totals.	...	49	bc	28	188	86.2	11.6	839	94.1	49	Cir cum. & Cir str.	Cum.	
Mean.	E <sup>N</sup> .	4		3	30-016	77.2	71.0	70	77.8	4			

## SATURDAY, 14th AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface, 0 to 10.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	1	bc	...	30.010	75.8	70.8	75	77.7	9	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 83° 5, min. 73° 2. Volcano of Mauna Loa very active.  7.30 A.M., anchored in Hilo Bay.
4.	E.	2	bc	...	30.021	75.8	69.8	71	77.5	7	...	Cum.	
6.	E.S.	1	bc	...	30.059	74.8	69.8	74	77.0	3	...	Cum. & Cm	
8.	Calm.	0	bc	...	30.076	78.3	70.8	65	...	2	...	Cum.	
10.	NE <sup>b</sup> E.	1	bc	...	30.072	78.8	71.8	67	...	3	Cir.	Cum.	
Noon.	NE <sup>b</sup> E.	1	bc	...	30.041	79.8	72.5	66	...	3	Cir.	Cum.	
2.	NE <sup>b</sup> E.	1	bc	...	30.019	82.3	72.8	59	...	3	Cir.	Cum.	
4.	NE <sup>b</sup> E.	1	bc	...	29.997	81.8	72.8	60	...	2	Cir.	Cum.	
6.	NE <sup>b</sup> E.	1	bc	...	29.997	79.5	71.8	64	77.5	4	...	Cum.	
8.	Calm.	0	bc	...	30.031	75.8	70.8	75	...	12	...	Cum.	
10.	sw <sup>b</sup> w.	1	bc	...	30.057	74.5	69.8	75	...	7	...	Cum.	
Midt.	sw <sup>b</sup> w.	2	bc	...	30.057	73.5	68.3	73	...	7	...	Cum.	
Totals.	...	12	bc	...	437	90.7	11.8	104	17	52	Cir.	Cum.	
Mean.	Variable.	1		...	30.036	77.6	71.0	69	77.4	4			

## SUNDAY, 15th.

2.	sw <sup>b</sup> w.	1	bc	...	30.025	72.3	67.3	74	...	4	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 83°, min. 68° 5.
4.	sw <sup>b</sup> w.	1	bc	...	30.008	70.8	65.8	73	...	4	Cir.	Cum.	
6.	NW <sup>b</sup> N.	1	bc	...	30.013	69.8	65.3	75	77.5	3	Cir.	Cum.	
8.	Calm.	0	bc	...	30.041	73.8	68.8	74	...	8	Cir.	Cum.	
10.	N <sup>b</sup> E.	1	bc	...	30.057	77.3	71.8	73	...	8	...	Cum.	
Noon.	NE <sup>b</sup> E.	1	bc	...	30.042	79.3	73.8	73	...	7	...	Cum.	
2.	NE <sup>b</sup> E.	1	bc	...	30.000	81.8	74.8	68	...	4	Cir.	Cum.	
4.	NE <sup>b</sup> E.	1	bc	...	29.980	81.5	75.5	72	...	6	Cir.	Cum.	
6.	E <sup>b</sup> N.	1	bc	...	30.000	79.3	74.3	75	79.7	6	...	Cum.	
8.	S.S.W.	3	bcp	...	30.031	76.3	73.3	84	...	7	...	Cum. & Str.	
10.	sw <sup>b</sup> w.	1	bcp	...	30.041	75.8	72.8	84	...	10	...	Cum. & Str.	
Midt.	sw <sup>b</sup> w.	1	bcp	...	30.041	74.3	71.8	87	...	9	...	Cum.	
Totals.	...	13	bcp	...	279	72.3	15.3	72	17.2	76	Cir.	Cum. & Str.	
Mean.	Variable.	1		...	30.023	76.0	71.3	76	78.6	6			

## MONDAY, 16th.

2.	sw <sup>b</sup> w.	1	bcp	...	30.029	73.5	71.3	88	...	8	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 81° 5, min. 72° 0.
4.	Calm.	0	ocr	...	30.000	72.8	70.8	89	...	10	...	Cum.	
6.	w <sup>b</sup> s.	1	ocr	...	30.011	73.8	71.8	89	78.0	10	...	Cum. str.	
8.	sw <sup>b</sup> w.	0	opr	...	30.041	74.8	72.8	89	...	8	...	Cum.	
10.	Variable.	2	bcd	...	30.027	75.8	73.8	89	...	8	...	Cum.	
Noon.	NE <sup>b</sup> E.	2	bc	...	30.032	78.3	75.3	84	...	6	Str.	Cum.	
2.	NE <sup>b</sup> E.	1	bc	...	29.994	79.8	74.8	75	...	7	Cir.	Cum.	
4.	NE <sup>b</sup> E.	1	bc	...	29.978	80.3	74.8	73	...	7	Cir.	Cum.	
6.	NE <sup>b</sup> E.	1	bc	...	29.990	78.3	73.8	77	80.5	8	...	Cum.	
8.	NE <sup>b</sup> E.	1	bc	...	30.019	77.3	73.8	81	...	8	...	Cum.	
10.	sw <sup>b</sup> w.	2	cnd	...	30.038	75.3	72.3	84	...	9	...	Cum.	
Midt.	sw <sup>b</sup> N.	1	or	...	30.036	73.8	71.3	87	...	10	...	Cum. & Nb.	
Totals.	...	13	ocr & bc	...	195	73.8	36.6	45	158.5	99	Cir. & Str.	Cum.	
Mean.	Variable.	1	...	...	30.016	76.1	73.0	84	79.2	8			

TUESDAY, 17TH August 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	sw½N.	1	oer	...	30·014	73·8	71·8	89	...	10	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 82°, min. 72° 5'.
4.	NE½E.	1	oer	...	29·996	73·3	71·8	91	...	10	...	Cum.	
6.	sw½W.	1	oep	...	30·036	72·8	71·5	93	76·0	10	...	Cum.	
8.	sw½W.	0	oep	...	30·067	78·3	75·3	84	...	10	...	Cm.&Nb.	
10.	sw½W.	1	oep	...	30·081	77·3	74·5	85	...	10	...	Cm.&Nb.	
Noon.	SE½S.	1	bcp	...	30·071	78·8	75·3	82	...	8	...	Cum.	
2.	E½S.	3	bcp	...	30·022	80·8	73·8	68	...	4	Cir str.	Cum.	
4.	NE½E.	3	bc	...	30·024	79·3	74·8	78	...	4	Cir str.	Cum.	
6.	NE½E.	2	bcp	...	30·046	77·8	74·3	81	80·0	8	...	Cum.	
8.	NE½E.	1	ep	...	30·090	76·0	73·0	84	...	10	...	Cum.	
10.	Calm.	0	oep	...	30·119	74·8	72·3	87	...	10	...	Cum.	
Midt.	Calm.	0	ep	...	30·121	74·8	72·3	87	...	10	...	Cum.	
Totals.	...	14	cp	...	687	77·8	40·7	49	...	104	Cir str.	Cum. & Nimb.	
Mean.	Variable.	1		...	30·057	76·5	73·4	84	78·0	9			

WEDNESDAY, 18TH.

2.	Calm.	0	cp	...	30·091	74·8	72·3	87	...	9	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 81°, min. 72°.
4.	NE½N.	2	op	...	30·086	73·8	70·8	84	...	10	...	Cum.	
6.	Calm.	0	e	...	30·108	73·3	71·3	89	78·0	9	...	Cum.	
8.	Calm.	0	e	...	30·135	74·0	71·5	87	...	8	...	Cm.&Str.	
10.	NE½E.	1	be	...	30·147	76·5	70·8	72	...	7	...	Cm.&Str.	
Noon.	NE½N.	1	be	...	30·131	78·5	72·5	71	...	3	...	Cum.	
2.	NE½E.	1	be	...	30·090	79·3	72·8	69	...	4	Cir.	Cm.&Str.	
4.	NE½E.	1	be	...	30·086	80·0	72·8	66	...	5	Cir.	Cm.&Str.	
6.	NE½E.	1	be	...	30·080	77·8	71·8	71	79·0	6	...	Cm.&Str.	
8.	NE½E.	1	be	...	30·109	76·8	71·3	73	...	5	...	Cum.	
10.	NW½N.	1	be	...	30·134	75·5	70·8	75	...	6	...	Cum.	
Midt.	W½S.	1	be	...	30·125	74·5	69·8	75	...	6	Cir.	Cum.	
Totals.	...	10	bcp	...	1322	74·8	18·5	79	...	78	Cir.	Cum. & Str.	
Mean.	Variable.	1		...	30·110	76·2	71·5	77	78·5	6			

THURSDAY, 19TH.

2.	NW½N.	3	bcp	...	30·077	71·8	68·3	81	...	8	...	Cum.	At Hilo. Temperature by self-registering thermo- meter, max. 81°, min. 70° 5'.  2 P.M., left Hilo for Tahiti.
4.	NW½N.	1	bcp	...	30·076	72·3	68·8	82	...	8	...	Cum.	
6.	NW½N.	1	bc	...	30·082	72·8	68·8	79	75·0	6	...	Cm.&Str.	
8.	NW½N.	1	bc	...	30·117	74·8	69·8	74	...	8	...	Cum.	
10.	NW½N.	1	bcpd	...	30·113	76·8	70·8	71	...	6	...	Cum.	
Noon.	Calm.	0	bc	...	30·105	77·3	71·3	71	...	5	...	Cum.	
2.	NE½E.	1	bc	...	30·052	79·0	71·3	64	...	6	...	Cm.&Str.	
4.	NE½E.	2	bcp	...	30·025	77·8	70·5	66	78·2	7	Cir.	Cum.	
6.	NE½E.	1	bc	...	30·024	77·3	70·8	69	78·2	5	...	Cum.	
8.	N.N.E.	2	bc	...	30·059	75·8	69·8	71	77·5	4	Cir.	Cum.	
10.	E.N.E.	1	bc	...	30·053	75·8	70·8	75	77·7	4	...	Cum.	
Midt.	NE½E.	3	bc	2	30·056	75·8	69·8	71	77·7	3	...	Cum.	
Totals.	...	17	bcpd	...	839	67·3	0·8	34	44·3	70	Cir.	Cum. & Str.	
Mean.	Variable.	1		2	30·070	75·6	70·1	73	77·4	6			

## FRIDAY, 20TH AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>NE</sup> E.	3	bc	...	30.009	75.5	70.8	75	77.5	5	...	Cum.	At noon, lat. 19° 10' N. long. 154° 12' W. Temperature by self-registering thermo- meter, max. 81°, min. 72° 5. Current, s. 8° E. 13'.
4.	E <sup>N</sup> N.	2	bc	...	30.008	73.8	70.3	81	77.2	2	...	Cum.	
6.	E. N. E.	4	bc	...	30.019	75.8	68.3	65	77.7	8	...	Cum.	
8.	E. N. E.	2	bc	...	30.059	73.8	68.8	74	77.2	6	...	Cum.&Str.	
10.	E. N. E.	3	bc	...	30.055	77.3	70.0	65	77.5	2	Cir.	Cum.	Sp. gr. 1.02597.
Noon.	E. N. E.	2	bc	...	30.023	77.8	71.5	67	78.0	3	Cir.	Cum.	
2.	E. N. E.	4	bc	...	29.994	76.8	70.8	71	77.5	3	...	Cum.	
4.	E <sup>N</sup> N.	3	bc	...	29.975	78.8	71.3	65	77.5	5	...	Cum.	
6.	E <sup>N</sup> N.	3	bc	...	29.994	76.3	71.3	75	77.7	7	Cir.	Cum.&Str.	
8.	E <sup>N</sup> N.	3	bc	...	30.023	76.3	71.3	75	77.2	4	...	Cum.	
10.	N <sup>NE</sup> E.	3	bc	...	30.028	75.8	70.8	75	77.0	7	Cir.	Cum.&Str.	
Midd.	E <sup>N</sup> S.	2	bc	...	30.021	75.8	70.8	75	77.0	5	Cir str.	Cum.	
Totals.	...	34	bc	10	208	73.8	6.0	23	50	64	Cir.	Cum. & Str.	
Mean.	E <sup>N</sup> N $\frac{1}{2}$ N.	3		2	30.017	76.1	70.5	72	77.4	5			

## SATURDAY, 21st.

2.	E.	3	bc	1	29.994	75.8	70.8	75	77.0	4	...	Cum.	At noon, lat. 17° 33' N. long. 153° 36' W. Temperature by self-registering thermo- meter, max. 80°, min. 74°. Current, s. 60° W. 10'.
4.	E <sup>N</sup> S.	4	bc	1	29.980	75.3	70.8	77	77.0	3	...	Cum.	
6.	N <sup>NE</sup> E.	2	bc	...	29.994	75.3	71.3	79	77.0	5	...	Cum.&Cumst	
8.	N. E.	3	bc	...	30.024	76.3	71.8	77	77.5	4	Cir.	Cum.	
10.	E. N. E.	2	bc	1	30.022	77.5	72.5	75	77.7	6	...	Cum.	Sp. gr. 1.02603.
Noon.	E <sup>N</sup> N.	2	bc	1	30.012	78.3	72.8	73	77.7	4	...	Cum.	
2.	E <sup>N</sup> N.	3	bc	...	29.982	78.3	72.8	73	77.5	4	Cir.	Cum.	
4.	E <sup>N</sup> N.	2	bc	...	29.986	74.8	72.8	89	77.5	6	Cir.	Cum.	
6.	E <sup>N</sup> S.	3	cp	...	30.004	75.8	72.8	84	77.7	8	...	Cum.&Str.	
8.	E <sup>N</sup> N.	4	cp	...	30.011	78.5	72.5	71	77.2	10	...	Cum.&Nb.	
10.	E.	2	cp	...	30.036	76.8	72.8	79	77.0	8	...	Cum.&Str.	
Midd.	E.	4	bc	...	30.028	75.8	71.8	79	77.0	2	...	Cum.&Str.	
Totals.	...	34	bc	4	073	78.5	25.5	91	38	64	Cir.	Cum., Str., & Cum str.	
Mean.	E <sup>N</sup> N.	3		1	30.006	76.5	72.1	78	77.3	5			

## SUNDAY, 22d.

2.	E <sup>N</sup> N.	3	bc	...	29.999	75.8	71.8	79	77.0	2	Cir.	Cum.	At noon, lat. 15° 40' N. long. 153° 0' W. Temperature by self-registering thermo- meter, max. 79° 2, min. 73° 0. Current, N. 77° W. 14'. Black bulb 131°.
4.	E <sup>N</sup> N.	4	bc	...	29.961	75.8	71.5	78	77.0	5	Cir.	Cum.	
6.	E.	3	bc	...	30.024	75.8	71.8	79	77.2	2	Cir.	Cum.	
8.	E <sup>N</sup> N.	4	bc	...	30.040	76.5	70.8	72	77.0	4	Cir.	Cum.	
10.	E <sup>N</sup> N.	3	bc	...	30.028	78.3	73.5	76	77.0	1	Cir.	Cum.	Sp. gr. 1.02571.
Noon.	E <sup>N</sup> N.	3	bc	...	30.023	78.8	73.0	72	77.0	2	Cir str.	Cum.	
2.	E <sup>N</sup> N.	3	bc	...	29.977	77.5	72.3	74	77.5	3	Cir.	Cum.	
4.	E <sup>N</sup> N.	3	bc	...	29.961	77.0	72.0	75	77.5	4	...	Cum.	
6.	E <sup>N</sup> N.	4	bc	...	29.978	76.8	71.8	75	...	4	...	Cum.	
8.	E.	3	bc	...	29.983	76.3	71.8	77	77.5	6	...	Cum.	
10.	E.	3	bc	...	30.009	76.5	71.5	75	77.2	8	...	Cum.	
Midd.	E.	3	bc	...	29.997	76.8	70.3	69	77.0	7	...	Cum.	
Totals.	...	39	bc	...	11880	81.9	22.1	61	19	48	Cir.	Cum.	
Mean.	E $\frac{1}{2}$ N.	3		...	29.998	76.8	71.8	75	77.2	4			

## MONDAY, 23d August 1875.

Hour.	Wind.		Weather.	Size of Sea, 0 to 4.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>N</sup> N.	3	bc	1	29.973	77.0	70.3	68	77.0	8	...	Cum.	At noon, lat. 14° 19' N. long. 152° 37' W. Temperature by self-registering thermo- meter, max. 82°, min. 74° 5. Current, s. 53° w. 23'.
4.	E <sup>N</sup> N.	2	bc	1	29.967	76.3	69.8	69	77.2	4	...	Str.	
6.	E <sup>N</sup> N.	2	bc	...	29.964	76.3	71.8	77	77.2	5	Str.	Cum.	
8.	E <sup>N</sup> N.	2	bc	1	30.007	77.8	71.8	71	77.2	3	...	Cum.&Str.	
10.	E <sup>N</sup> N.	3	bc	...	30.016	78.3	72.3	71	77.5	1	...	Cum.&Str.	Black bulb 129°.
Noon.	E <sup>N</sup> N.	3	bc	...	30.019	79.8	73.3	69	77.7	3	...	Cum.	
2.	NE <sup>N</sup> E.	3	bc	...	29.969	81.0	73.5	66	78.0	2	Cir.	Cum.	
4.	NE <sup>N</sup> E.	3	bc	...	29.949	79.5	72.5	67	78.0	1	Cir.	...	
6.	E. N. E.	3	bc	...	29.962	77.8	72.5	74	78.0	4	...	Cum.	...
8.	E.	3	bc	1	29.981	76.8	71.8	75	77.8	4	...	Cum.	
10.	E.	4	bc	...	29.966	75.8	71.5	78	77.0	3	...	Cum.	
Midt.	E.	3	bc	...	29.981	76.3	71.8	77	77.2	4	...	Cum.	
Totals.	...	34	bc	5	11804	92.7	72.9	22	58	42	Cir. & Str.	Cum. & Str.	
Mean.	E <sup>N</sup> N.	3		1	29.984	77.7	71.9	72	77.5	3			

## TUESDAY, 24th.

2.	E <sup>N</sup> N.	3	bc	...	29.945	76.8	72.0	76	77.2	4	...	Cum.	At noon, lat. 13° 1' N. long. 151° 50' W. Temperature by self-registering thermo- meter, max. 79°, min. 74° 2. Current, s. 71° w. 18'. Long s.e. swell.
4.	E. N. E.	3	bc	...	29.932	76.0	72.5	81	77.0	7	...	Cum.	
6.	NE <sup>N</sup> E.	3	bc	...	29.943	75.8	72.8	84	77.2	5	Cir cum.	Cum.&Cumst	
8.	NE <sup>N</sup> E.	3	bc	...	29.999	77.3	73.3	79	78.0	8	Cir cum.	Cum.&Cumst	
10.	E. N. E.	3	c	...	29.986	78.0	74.3	80	78.0	10	...	Cum str.	Sp. gr. 1.02612.
Noon.	E. N. E.	4	cpm	...	29.958	76.3	74.5	90	78.5	10	...	Str.&Cumst	
2.	SE <sup>N</sup> S.	3	bc	...	29.901	77.8	74.8	84	79.0	9	...	Cum.&Str.	
4.	E <sup>N</sup> S <sup>N</sup> S.	1	bc	...	29.903	78.3	74.8	82	78.7	9	Cir.	Cum.&Str.	
6.	N. E.	2	c	...	29.927	77.5	74.8	85	78.7	10	...	Cum.&Nb.	...
8.	Variable.	0	cr	...	29.943	75.5	73.8	90	78.2	10	...	Nimb.	
10.	E.	1	cp	...	29.978	75.8	74.8	94	78.2	10	...	Str.	
Midt.	SE <sup>N</sup> S.	0	cp	...	29.960	76.5	74.8	91	78.2	8	...	Str.	
Totals.	...	26	bc	...	11375	81.6	47.2	56	96.9	100	Cir cum.	Cum., Str., & Nimb.	
Mean.	E <sup>N</sup> N.	2		...	29.948	76.8	73.9	85	78.1	8			

## WEDNESDAY, 25th.

2.	S.	1	bc	...	29.933	76.8	74.8	89	78.2	6	...	Cum.	At noon, lat. 12° 42' N. long. 152° 1' W. Temperature by self-registering thermo- meter, max. 82°, min. 75°. Current, s. 71° w. 19'.
4.	SE <sup>N</sup> S.	0	cpd	...	29.907	76.8	74.8	89	78.2	10	...	Cum.	
6.	SE <sup>N</sup> S.	1	bc	...	29.938	77.0	74.8	88	78.5	5	Cr.&Cr.cm.	Str.	
8.	E <sup>N</sup> N.	1	bc	...	29.962	77.3	74.8	87	78.7	7	Cir cum.	Str.	
10.	E <sup>N</sup> N.	2	bc	...	29.965	80.3	76.3	80	79.2	5	Cir cum.	Str.	Sp. gr. 1.02580.
Noon.	E <sup>N</sup> S.	1	bc	...	29.968	80.3	77.3	85	79.5	7	Cir cum.	Str.&Cum.	
2.	E. S. E.	2	bc	...	29.939	80.8	76.0	77	79.2	3	Str.	Cum.&Cumst	
4.	E <sup>N</sup> S.	1	bcp	...	29.927	80.8	76.0	77	79.5	2	...	Cum.	
6.	E.	3	bc	...	29.946	79.3	74.3	75	79.0	4	...	Cum.	...
8.	E.	3	bc	...	29.962	78.8	74.3	78	79.0	2	...	Cum.	
10.	E.	3	bc	...	29.976	78.3	73.8	77	78.7	2	...	Cum.	
Midt.	E.	2	b	...	29.966	78.0	73.8	78	78.2	0	...	...	
Totals.	...	20	bc	...	11389	104.5	61.0	20	105.9	53	Cir cum. & Str.	Cum. & Str.	
Mean.	E <sup>N</sup> S.	2		...	29.949	78.7	75.1	82	78.8	4			

THURSDAY, 26TH AUGUST 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Do. Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>1</sup> s.	2	bc	...	29.934	77.8	74.0	80	78.5	1	...	Cum.	At noon, lat. 11° 11' N. long. 152° 2' W. Temperature by self-registering thermometer, max. 83°, min. 76°. Current, s. 62° W. 19'. Black bulb 131°. Sp. gr. 1.02597.
4.	E <sup>1</sup> s.	2	b	...	29.930	77.3	72.8	77	78.5	0	...	...	
6.	E <sup>1</sup> s.	2	bc	...	29.953	77.0	72.8	78	78.2	3	Cir.	Cum.	
8.	E <sup>1</sup> s <sup>1</sup> s.	2	bc	...	29.991	80.3	74.8	73	79.0	4	...	Cum.	
10.	E <sup>1</sup> s.	2	bc	...	30.007	81.3	75.3	72	79.5	12	Cir.	Cum.	
Noon.	E <sup>1</sup> N.	3	bc	...	29.977	81.5	75.8	73	79.7	19	Cir cum.	Cm.&Str.	
2.	E <sup>1</sup> N.	2	bc	...	29.923	81.8	75.5	71	80.0	5	Cir cum.	Cum.	
4.	E <sup>1</sup> N.	3	bc	...	29.916	81.3	75.3	72	80.0	5	Cir.	Cum.	
6.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.937	78.8	74.8	80	79.5	8	...	Cm.&Cm.st	
8.	E <sup>1</sup> N.	2	bcp	...	29.958	78.8	73.8	75	79.0	8	...	Cm.&Cm.st	
10.	E <sup>1</sup> N.	1	bc	...	29.962	78.8	74.5	79	79.0	1	...	Cum.	Totals.
Midd.	E <sup>1</sup> N.	1	bc	...	29.960	78.8	74.5	79	79.0	12	...	Cum.	
Totals.	...	23	bcp	...	11448	113.5	53.9	909	109.9	41	Cir. & Cir cum.	Cum. & Cum str.	Mean.
Mean.	E.	2		...	29.954	79.5	74.5	76	79.2	3			

FRIDAY, 27TH.

2.	E <sup>1</sup> s.	1	bc	...	29.937	78.3	74.3	79	79.0	4	...	Cm.&Str.	At noon, lat. 10° 32' N. long. 152° 2' W. Temperature by self-registering thermometer, max. 84°, min. 76°.5. Current, s. 53° W. 18'. Black bulb 139°. Sp. gr. 1.02575.
4.	Variable.	0	b	...	29.917	77.8	74.3	81	79.0	0	...	...	
6.	E <sup>1</sup> N <sup>1</sup> N.	1	bc	...	29.942	77.8	74.8	84	79.0	3	...	Cm.&Str.	
8.	sse <sup>1</sup> E <sup>1</sup> E.	0	bc	...	29.977	80.3	75.8	78	79.5	12	...	Cir.&Str.	
10.	Calm.	0	bc	...	29.993	82.8	76.8	72	81.0	12	...	Cm.&Cm.st	
Noon.	Calm.	0	bc	...	29.930	83.3	76.3	70	81.0	12	...	Cm.&Cm.st	
2.	sse <sup>1</sup> E <sup>1</sup> E.	2	bcp	...	29.915	81.8	76.3	74	81.7	9	...	Cm.st.&Nb	
4.	E <sup>1</sup> s.	2	bc	...	29.890	79.8	75.0	76	80.7	7	Cir str.	Cum.	
6.	sse <sup>1</sup> E <sup>1</sup> E.	2	bc	...	29.916	79.8	74.8	75	80.5	5	Cir cum.	Cm.&Str.	
8.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.953	78.8	74.5	79	80.5	12	...	Str.	Totals.
10.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.985	79.8	74.8	75	80.2	8	...	Cm.&Cm.st	
Midd.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.953	79.3	74.8	78	80.2	12	...	Cum.	Mean.
Totals.	...	11	bcp	...	11317	119.6	62.5	81	2.3	43	Cir str. & Cir cum.	Cum., Str., & Cum str.	
Mean.	s.e.	1		...	29.943	79.9	75.2	77	80.2	4			

SATURDAY, 28TH.

2.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.923	79.0	75.3	81	80.0	2	Cir.	Cum.	At noon, lat. 9° 28' N. long. 150° 49' W. Temperature by self-registering thermometer, max. 83°, min. 75°.2. Current, s. 34° E. 19'. Black bulb 135°. Sp. gr. 1.02506.
4.	sse <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.899	79.0	75.8	84	80.0	2	Cir.	Cum.	
6.	s <sup>1</sup> E.	1	cp	...	29.953	76.8	75.8	84	79.7	9	...	Cum.	
8.	sse <sup>1</sup> W.	0	bc	...	29.955	78.5	75.3	83	80.0	6	Cir.	Cm.&Str.	
10.	s <sup>1</sup> W.	1	bc	...	29.976	81.8	76.3	75	80.7	3	Cir str.	...	
Noon.	s <sup>1</sup> W.	0	bc	...	29.973	82.0	75.8	71	81.5	5	Cir str.	...	
2.	Variable.	1	bc	...	29.922	80.8	75.3	74	82.0	9	...	Cm.st.&Nb	
4.	E <sup>1</sup> s.	1	bc	...	29.918	79.8	75.3	77	81.5	8	Cir str.	Cum.	
6.	sse <sup>1</sup> E <sup>1</sup> E.	0	bc	...	29.926	79.3	75.3	80	80.5	8	Cir str.	Cm.&Str.	
8.	sse <sup>1</sup> E <sup>1</sup> E.	3	cp	...	29.966	77.8	74.8	84	80.0	10	...	Str.	Totals.
10.	sse <sup>1</sup> E <sup>1</sup> E.	1	cp	...	30.001	77.5	74.5	84	79.5	10	...	Str.	
Midd.	sse <sup>1</sup> E <sup>1</sup> E.	2	cp	...	29.987	77.8	75.3	86	79.5	10	...	Str.	Mean.
Totals.	...	12	bcpd	...	11429	110.1	63.0	3	4.9	82	Cir. & Cir str.	Cum. & Str.	
Mean.	sEs.	1		...	29.952	79.2	75.2	80	80.4	7			

## SUNDAY, 29TH August 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 4.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. to.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>b</sup> S <sup>1</sup> S.	1	bc	...	29.938	77.8	74.8	84	79.7	1	...	Cum.	At noon, lat. 8° 26' N. long. 149° 51' W. Temperature by self-registering thermo- meter, max. 79°, min. 74° 5. Current E. 7'. Sp. gr. 1.02566.
4.	E <sup>b</sup> S.	2	cr	...	29.933	75.8	73.8	89	79.5	10	...	Cum. & Cumst.	
6.	E <sup>b</sup> S.	1	c	...	29.960	77.8	74.8	84	79.5	9	...	Cum. & Cumst.	
8.	SE <sup>b</sup> E <sup>1</sup> E.	2	cp	...	29.971	77.3	74.8	87	80.0	10	...	Cm. St. & Nb.	
10.	E <sup>b</sup> S.	1	bcp	...	29.983	75.8	75.3	88	80.0	8	...	Cum. & Cumst.	
Noon.	E <sup>b</sup> S.	3	bcp	...	29.978	75.8	75.3	97	80.0	8	...	Cm. St. & Nb.	
2.	SE <sup>b</sup> E <sup>1</sup> E.	2	opdt	2	29.934	76.8	74.8	89	80.5	10	...	St. & Cm. st.	
4.	SE <sup>b</sup> S.	3	oprd	...	29.901	75.8	74.5	93	80.5	10	...	Str. & Nb.	
6.	SE <sup>b</sup> S.	1	opd	...	29.899	76.8	74.8	89	80.5	10	...	Cm. St. & Nb.	
8.	SE <sup>b</sup> S.	3	ocp	...	29.919	78.0	75.8	88	80.5	10	...	Cm. St. & Nb.	
10.	SE <sup>b</sup> S.	2	bc	...	29.939	77.8	75.3	86	80.5	4	...	Cm. & Str.	
Midd.	SE <sup>b</sup> S.	2	bc	...	29.917	77.8	74.8	84	80.5	8	...	Cum.	
Totals.	...	23	...	...	11272	85.0	58.8	98	17	98	...	Cum., Str., & Nimb.	
Mean.	SE <sup>b</sup> E <sup>1</sup> E.	2	...	2	29.939	77.1	74.9	88	80.1	8	...		

## MONDAY, 30TH.

2.	SE <sup>b</sup> S.	1	bcp	...	29.890	76.8	74.8	89	80.5	9	...	Nimb.	At noon, lat. 7° 35' N. long. 149° 49' W. Temperature by self-registering thermo- meter, max. 81°, min. 75° 5. Current, E. 27'.  Sp. gr. 1.02586.  7 P.M., heavy continuous rain and vivid lightning.
4.	SE <sup>b</sup> S.	2	b	...	29.873	77.5	75.3	88	80.5	0	...	...	
6.	SE <sup>b</sup> E <sup>1</sup> E.	1	bcp	...	29.923	76.8	75.0	90	81.0	2	Cir str.	Cum. & Cumst.	
8.	S <sup>b</sup> E <sup>1</sup> E.	4	bc	...	29.954	79.3	76.3	85	81.0	5	Cir str.	Cum.	
10.	S <sup>b</sup> E <sup>1</sup> E.	4	bcp	...	29.947	78.8	74.8	89	81.0	7	...	Cum str.	
Noon.	S <sup>b</sup> E <sup>1</sup> E.	3	bcp	...	29.921	75.8	75.5	84	81.0	10	...	Cm. St. & Nb.	
2.	S <sup>b</sup> E <sup>1</sup> E.	4	b	...	29.907	79.5	75.8	81	81.0	10	...	Cm. & Str.	
4.	S <sup>b</sup> E <sup>1</sup> E.	3	c	...	29.875	80.3	75.8	78	81.2	10	...	Cm. & Str.	
6.	S <sup>b</sup> E <sup>1</sup> E.	2	or	...	29.884	76.8	75.3	91	81.0	10	...	Str.	
8.	E <sup>b</sup> S.	4	orlt	...	29.941	75.8	74.8	94	81.0	10	...	Nimb.	
10.	S <sup>b</sup> E <sup>1</sup> E.	1	orlt	...	29.943	75.3	74.5	95	80.2	10	...	Nimb.	
Midd.	SE <sup>b</sup> E <sup>1</sup> E.	0	orlt	...	29.935	74.3	73.5	95	80.0	10	...	Nimb.	
Totals.	...	26	...	...	10993	90.0	61.4	90	9.4	93	...	Cum., Str., & Nimb.	
Mean.	SE <sup>b</sup> S.	2	bcp & orlt	...	29.916	77.5	75.1	88	80.8	8	Cir str.		

## TUESDAY, 31st.

2.	SE <sup>b</sup> S.	1	orl	...	29.905	74.8	74.3	97	80.0	10	...	Nimb.	At noon, lat. 7° 41' N. long. 148° 56' W. Temperature by self-registering thermo- meter, max. 78° min. 72'. Current, N. 74', E. 54'. Cross sea. Sp. gr. 1.02488.
4.	SSW <sup>1</sup> W.	1	orl	...	29.895	74.3	73.8	97	79.5	10	...	Nimb.	
6.	Calm.	0	or	...	29.923	74.8	73.8	94	79.5	10	...	Nimb.	
8.	Variable.	1	od	...	29.968	73.8	72.8	94	80.0	9	...	Nimb.	
10.	S <sup>1</sup> W.	1	or	...	29.976	73.8	73.3	97	80.0	10	...	Nimb.	
Noon.	S <sup>1</sup> W.	2	or	...	29.968	74.3	73.8	97	80.2	10	...	Nimb.	
2.	SSW <sup>1</sup> W.	2	orlt	...	29.919	74.8	73.8	94	80.2	10	...	Nb. & Str.	
4.	SSW <sup>1</sup> W.	2	orlt	...	29.889	75.0	74.0	94	80.2	10	...	Nb. & Str.	
6.	SE <sup>1</sup> E.	3	od	...	29.938	77.5	72.8	76	80.2	10	...	Nb. & Str.	
8.	S <sup>b</sup> E <sup>1</sup> E.	2	bc	...	29.990	76.8	72.5	78	80.0	7	...	Cm. & Str.	
10.	S <sup>b</sup> E <sup>1</sup> E.	3	or	...	30.004	76.8	71.8	75	80.2	10	...	Str.	
Midd.	Variable.	1	or	...	29.986	73.8	72.3	91	80.0	10	...	Str.	
Totals.	...	20	...	...	11361	60.5	39.0	4	0	116	...	Nimb. & Str.	
Mean.	s.	2	...	...	29.947	75.0	73.2	90	80.0	10	...		

## WEDNESDAY, 1ST SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 2.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.w.w.	12	cp	...	29.944	74.3	72.3	89	80.0	10	...	Str.	At noon, lat. 7° 17' N. long. 147° 20' W. Temperature by self-registering thermo- meter, max. 81° 8, min. 72° 0. Current, N. 74° E. 54'.
4.	s.w.w.	1	bc	...	29.938	75.0	72.5	87	80.0	8	...	Cum.	
6.	s.w.s.	1	bc	...	29.957	76.8	71.8	75	80.7	6	Cir.	Cm.&Str.	
8.	s.w.w.	1	bc	...	29.957	77.8	73.8	79	81.0	3	...	Str. cum.	
10.	s.w.	1	bc	...	29.947	79.8	74.8	75	81.7	8	...	Cum.	
Noon.	s.e.e.	0	bc	...	29.943	80.8	75.3	74	81.7	8	...	Str.&Cm.	
2.	s.e.e.	2	bcp	...	29.915	78.8	75.3	82	81.5	5	...	Cum.	
4.	s.e.s.	3	bc	...	29.894	79.8	74.8	75	81.5	8	...	Str.&Cm.	
6.	s.e.e.	1	bc	...	29.910	79.3	73.8	73	81.0	3	Cir cum.	Cm.&Str.	
8.	s.e.e.	2	bc	...	29.932	78.8	74.3	78	81.0	3	...	Cm.&Str.	
10.	s.e.e.	1	bc	...	29.981	78.8	73.8	75	81.0	12	Cir cum.	...	Numerous porpoises and boatswain birds seen. Sp. gr. 1.02601.
Midt.	s.e.e.	2	bc	...	29.957	79.3	74.3	75	...	12	Cir.	...	
Totals.	...	17	bcp	...	11275	99.3	46.8	97	11.1	66	Cir. & Cir cum.	Cm.&Str.	
Mean.	s.	1		...	29.939	78.3	73.9	78	81.0	5			

## THURSDAY, 2d.

2.	s.e.s.	3	bcp	...	29.933	78.3	74.8	81	80.2	10	...	Cum.	At noon, lat. 5° 54' N. long. 147° 2' W. Temperature by self-registering thermo- meter, max. 82° 5, min. 75° 5. Current, S. 75° E. 24'.
4.	s.e.s.	1	bc	...	29.916	77.8	74.8	84	80.2	2	...	Cum.	
6.	s.e.s.	2	bcp	...	29.910	77.3	74.8	87	81.0	4	Cir cum.	Cm.&Cum.st	
8.	s.e.s.	3	bc	...	29.936	78.8	75.0	81	81.0	7	Cir cum.	Cm.&Cum.st	
10.	s.e.s.	2	bc	...	29.950	80.8	75.8	76	81.2	6	Cir cum.	Cm.&Cum.st	
Noon.	s.e.s.	3	bcp	...	29.924	81.0	76.3	77	81.5	5	...	Cum.	
2.	s.e.s.	2	bc	2	29.864	78.8	75.8	85	81.5	5	Cir cum.	Cum.	
4.	s.e.s.	2	bc	2	29.842	80.3	75.8	78	81.5	3	...	Cum.	
6.	s.e.e.	3	bc	2	29.866	80.8	76.8	80	81.0	6	...	Cum.	
8.	s.e.e.	4	bc	...	29.916	80.5	76.0	78	81.0	7	...	Cum.	
10.	s.e.e.	4	bc	...	29.916	79.8	74.8	75	80.5	4	...	Cum.	A few gannets seen. Sp. gr. 1.02612.
Midt.	s.e.e.	4	bc	...	29.928	79.5	74.5	75	80.0	2	...	Cum.	
Totals.	...	33	bcp	6	10901	113.7	65.2	117	10.6	61	Cir cum.	Cum. & Cum str.	
Mean.	s.e.	3		2	29.908	79.5	75.4	80	80.9	5			

## FRIDAY, 3d.

2.	s.e.e.	6	bcp	...	29.928	78.8	74.8	80	80.0	4	...	Cum.	At noon, lat. 3° 35' N. long. 148° 5' W. Temperature by self-registering thermo- meter, max. 82°, min. 76° 5. Current, S. 65° W. 17'. A boatswain bird seen. Sp. gr. 1.02621.
4.	s.e.e.	4	bcp	...	29.896	78.8	75.8	85	80.0	2	Cir.	Cum.	
6.	s.e.e.	5	bcp	...	29.917	77.8	74.3	81	79.5	7	...	Cm.&Cum.st	
8.	s.e.e.	4	bc	...	29.946	79.5	74.3	74	79.5	4	...	Cum.	
10.	s.e.s.	5	bc	...	29.951	80.8	74.8	72	79.5	6	...	Cum.	
Noon.	s.e.s.	4	bc	...	29.917	81.3	74.8	70	78.5	5	...	Cum.	
2.	s.e.e.	4	bc	...	29.889	79.8	74.3	73	79.5	5	...	Cum.	
4.	s.e.e.	3	bc	...	29.875	79.8	74.8	75	79.5	7	...	Cum.	
6.	s.e.e.	4	bc	...	29.930	79.3	74.0	74	79.5	5	...	Cum.	
8.	s.e.e.	2	bcp	...	29.949	78.8	73.8	75	79.5	6	...	Cum.	
10.	s.e.e.	3	bc	...	29.967	78.8	74.0	76	79.2	3	...	Cum.	
Midt.	s.e.e.	2	bc	...	29.958	78.5	73.8	76	79.2	4	...	Cum.	
Totals.	...	46	bcp	...	11123	112.0	53.5	71	113.4	58	Cir.	Cum.	
Mean.	s.e.e.	4		...	29.927	79.3	74.5	76	79.4	5			

## SATURDAY, 4TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre- dine to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.937	78.3	72.8	73	79.0	3	...	Cum.	At noon, lat. 2° 34' N. long. 149° 9' W. Temperature by self-registering thermo- meter, max. 82.7, min. 77.0. Current, s. 76° W. 55.
4.	SE <sup>1</sup> / <sub>2</sub> E.	3	c	...	29.949	78.0	73.0	75	79.0	10	...	Cum. & Str.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	5	bc	...	29.942	78.0	72.8	74	79.0	7	Cir cum.	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.969	78.8	73.8	75	79.5	6	Cir cum.	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> E.	5	bey	...	29.966	78.8	73.3	73	...	5	Cir str.	Cum.	
Noon.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.946	81.5	74.3	67	...	4	Cir.	Cum.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.879	79.5	73.8	72	79.5	3	...	Cum.	
4.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.871	79.3	73.8	73	79.5	3	Cir.	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.892	79.3	73.8	73	79.0	2	...	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.942	77.8	72.8	75	79.0	3	Cir.	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.956	77.8	72.8	75	78.7	2	...	Cum.	Sp. gr. 1.02634.
Midt.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.973	77.3	72.8	77	78.7	2	...	Cum.	
Totals.	...	41	...	...	11192	104.4	39.8	42	9	50	Cir. & Cir cum.	Cum.	
Mean.	SE <sup>1</sup> / <sub>2</sub> E.	3	bey	...	29.933	78.7	73.3	73	79.1	4	...	...	

## SUNDAY, 5TH.

2.	SE <sup>1</sup> / <sub>2</sub> E.	2	b	...	29.931	76.8	72.5	78	...	0	...	...	At noon, lat. 0° 44' N. long. 150° 46' W. Temperature by self-registering thermo- meter, max. 86°, min. 75°. Current s. 85° W. 70.
4.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.917	76.5	72.3	78	...	1	...	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.948	76.5	71.8	77	77.0	2	Str.	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.975	77.5	73.3	78	77.0	5	Cir str.	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.971	78.8	74.8	80	77.5	5	Cir.	Cum.	
Noon.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.951	78.8	73.8	75	77.2	5	Cir.	Cum.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.901	77.8	72.8	75	77.8	4	...	Cum.	
4.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.896	77.5	73.0	77	77.7	2	...	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.921	77.5	72.8	76	77.0	...	Cir.	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.945	76.8	72.3	77	77.0	3	...	Cum.	Sp. gr. 1.02652.
10.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.953	75.8	72.3	81	77.0	...	...	Cum.	
Midt.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.947	75.8	72.3	81	77.0	2	...	Cum.	
Totals.	...	29	...	...	11256	86.1	34.0	93	22	33	Cir. & Str.	Cum.	
Mean.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.938	77.2	72.8	78	77.2	3	...	...	

## MONDAY, 6TH.

2.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.952	76.8	71.8	75	77.0	2	...	Cum.	At noon, lat. 0° 33' N. long. 151° 34' W. Temperature by self-registering thermo- meter, max. 79° 7', min. 73° 5'. Current s. 81° W. 49.
4.	SE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.938	75.8	71.8	79	77.0	1	...	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.958	75.8	71.8	79	77.0	4	...	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.974	76.8	72.3	77	77.5	6	Cir.	Cum.	
10.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.984	77.8	73.3	77	77.5	4	Cir.	Cum.	
Noon.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.940	78.3	75.3	75	78.0	3	...	Cum.	
2.	SE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.900	79.3	75.3	71	79.0	3	Cir.	Cum.	
4.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.909	78.8	72.8	71	78.0	3	Cir.	Cum.	
6.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.917	77.8	72.8	75	77.5	3	...	Cum.	
8.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.937	77.0	72.8	78	77.7	3	...	Cum.	Sp. gr. 1.02672.
10.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.943	76.8	72.3	77	77.5	3	...	Cum.	
Midt.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.947	76.8	71.8	75	77.5	4	...	Cum.	
Totals.	...	34	...	...	11299	87.8	30.1	69	91.2	39	Cir.	Cum.	
Mean.	SE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	29.942	77.3	72.5	76	77.6	3	...	...	

## TUESDAY, 7TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sky, 0 to 3.	Barometrical alt. to 32 and Sea Level.	Thermometer.			Humidity, Sat. at 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	S.E. by E.	4	bc	...	29.941	76.8	71.8	75	78.0	1	...	Cir cum.		At noon, lat. 2° 23' s. long. 152° 34' w. Temperature by self-registering thermo- meter, max. 80° 5, min. 75 5. Current, w. 34'.
4.	S.E. by E.	4	bc	...	29.911	76.8	71.8	75	78.0	1	...	Cum.		
6.	S.E. by E.	3	bc	...	29.940	76.8	71.8	75	77.7	3	...	Cum.		
8.	S.E. by E.	3	bc	...	29.982	77.8	72.8	75	78.0	3	...	Cum.		
10.	S.W. by E.	3	bc	...	29.975	79.5	73.5	71	78.0	2	...	Cum.		Sp. gr. 1.02656.
Noon.	S.W. by E.	3	bc	...	29.954	79.8	73.8	71	78.0	4	...	Cum.		
2.	E.S. by S.	3	bc	...	29.867	78.5	73.3	74	78.5	4	...	Cum.		
4.	E.S.	3	bc	...	29.867	78.3	72.8	73	78.5	5	...	Cum.		
6.	E.S.	12	bc	...	29.886	78.0	73.3	76	78.7	12	...	Cir.		
8.	E.S.	3	bc	...	29.930	77.8	73.3	78	78.0	12	...	Cir.		
10.	E.S.	3	bc	...	29.928	77.8	73.0	76	78.2	5	...	Cum.		
Midd.	E.	3	bc	...	29.921	77.5	72.8	76	78.2	3	...	Cum.		
Totals.	...	33	bc	...	41102	95.4	34.0	55	1.8	35	...	Cir.	Cum.	
Mean.	E.S.E.	3	...	...	29.925	77.9	72.8	75	78.1	3	...	...	...	

## WEDNESDAY, 8TH.

2.	E.S.	3	bc	...	29.893	77.3	72.8	77	78.5	5	...	Cum.		At noon, lat. 3° 48' s. long. 152° 56' w. Temperature by self-registering thermo- meter, max. 81° 5, min. 76 0. Current, w. 44'.
4.	E.S.	12	bc	...	29.870	76.8	72.8	79	78.2	12	...	Cum.		
6.	E.S.	12	bc	...	29.896	77.3	72.3	75	78.2	4	...	Cum.		
8.	E.S.	12	bc	...	29.850	77.8	72.8	75	78.5	4	...	Cum.		
10.	E.S.	12	bc	...	29.924	79.8	73.8	71	79.0	4	...	Cum.		Sp. gr. 1.02662.
Noon.	E.S.	12	bc	...	29.856	80.8	74.3	70	79.0	12	...	Cum.		
2.	E.S.	3	bc	...	29.834	80.8	74.3	70	79.0	3	...	Cum.		
4.	E.S.	12	bc	...	29.822	80.8	74.3	70	79.0	3	...	Cum.		
6.	E.S.	3	bc	...	29.850	79.3	73.3	71	79.0	3	...	Cum.		
8.	E.S.	12	bc	...	29.894	78.3	72.8	73	78.0	3	...	Cum.		
10.	E.S.	12	bc	...	29.896	78.3	72.8	73	78.5	2	...	Cum.		
Midd.	E.S.	12	bc	...	29.898	77.8	72.8	75	78.5	2	...	Cum.		
Totals.	...	27	bc	...	10543	105.1	39.1	39	103.4	37	...	...	Cum.	
Mean.	E.S.	2	2	2	29.879	78.8	73.3	73	78.6	3	...	...	...	

## THURSDAY, 9TH.

2.	E.S.	12	bc	...	29.874	77.5	72.8	76	78.5	3	...	Cum.		At noon, lat. 5 7' s. long. 152° 56' w. Temperature by self-registering thermo- meter, max. 82° 5, min. 75 7. Current, s. 75' w. 31'.
4.	E.S.	1	bc	...	29.870	77.5	72.8	76	78.2	2	...	Cum.		
6.	E.S.	12	bc	...	29.887	77.3	72.8	77	78.5	3	...	Cum.		
8.	E.S.	12	bc	...	29.923	77.8	72.8	75	78.7	5	...	Cum.		
10.	E.S.	3	bc	...	29.918	79.8	73.8	71	79.0	4	...	Cum.		Sp. gr. 1.02650.
Noon.	E.S.	12	bc	1	29.908	79.8	74.5	74	79.5	5	...	Cum.		
2.	E.S. by N.	12	bc	...	29.866	81.8	74.8	68	80.0	3	...	Cum.		
4.	E.S.	12	bc	2	29.842	81.8	74.5	67	80.0	4	...	Cum.		
6.	E.S.	12	bc	...	29.878	79.8	73.8	71	79.2	3	...	Cum.		
8.	E.S.	12	bc	...	29.918	79.0	73.8	74	79.5	4	...	Cum.		
10.	E.S. by S.	12	bc	...	29.926	79.3	73.8	73	79.5	4	...	Cum.		
Midd.	E.S.	12	bc	...	29.908	78.5	73.3	74	79.5	3	...	Cir.	Cum.	
Totals.	...	24	bc	5	10718	109.9	43.5	36	110.1	43	...	Cir.	Cum.	
Mean.	E.	2	2	2	29.893	79.2	73.5	73	79.2	4	...	...	...	

## FRIDAY, 10TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clocks 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	E.N.	12	bc	...	29.904	78.3	72.8	73	79.5	3	...	Cum.	At noon, lat. 6° 26' s. long. 152° 36' w. Temperature by self-registering thermometer, max. 81° 8, min. 76° 2. Current, s. 63° w. 18'.
4.	E.N.	12	bc	...	29.900	78.3	72.8	73	79.5	1	...	Cum.	
6.	E.N.	12	bc	...	29.938	77.8	73.0	76	79.5	4	...	Cum.	
8.	E.N.	12	bcp	...	29.958	78.8	73.8	75	79.5	8	...	Cum.&Nb.	
10.	E.N.	12	bc	...	29.990	80.8	74.5	71	80.0	5	...	Cum.	
Noon.	E.N.	3	bcp	...	29.966	78.8	72.8	71	80.0	6	...	Cum.&Str.	
2.	E.N.	12	bc	1	29.896	80.3	74.8	73	80.2	4	...	Cum.	
4.	N.E.	12	bcp	...	29.886	80.3	74.8	73	80.5	8	...	Cum.	
6.	N.E.	12	bc	3	29.928	79.3	73.3	71	80.0	6	...	Cum.&Str.	
8.	N.E.	12	bc	...	29.940	79.0	73.5	73	80.0	1	Cir.	...	
10.	N.E.	3	bc	...	29.968	78.8	73.8	75	80.0	5	...	Cir cum.	Sp. gr. 1.02667.
Midt.	N.E.	12	bc	...	29.965	78.8	73.8	75	79.7	8	...	Cum.&Str.	
Totals.	...	26	bcp	4	11239	109.3	43.7	39	118.4	59	Cir.	Cum. & Str.	
Mean.	E.N.	2		2	29.937	79.1	73.6	73	79.9	5			

## SATURDAY, 11TH.

2.	E.N.	4	bcp	...	29.901	74.8	72.8	89	79.7	...	Cir cum.	Cum.&Nb.	At noon, lat. 7° 25' s. long. 152° 15' w. Temperature by self-registering thermometer, max. 83° 7', min. 73° 0. Current, s. 47° w. 18'. 1.45 A.M., heavy rain squall. Sp. gr. 1.02667.
4.	N.E.	2	bcp	...	29.900	76.8	74.3	86	79.5	...	...	...	
6.	E.N.	3	bcp	1	29.938	78.0	74.8	83	79.7	4	Str.	Cum&Cumst	
8.	E.N.	3	bcp	3	29.980	78.8	74.8	80	79.7	7	...	Cum&Str	
10.	E.N.	3	bc	...	29.976	80.5	74.8	72	79.7	2	...	Cum.	
Noon.	E.N.	3	bc	...	29.944	81.5	75.5	72	80.2	1	...	Cum.	
2.	E.N.	3	bc	...	29.903	82.5	75.8	69	80.2	5	...	Cum.	
4.	E.N.	2	bc	...	29.885	81.8	75.0	69	80.2	4	...	Cum.	
6.	E.N.	2	bc	...	29.966	80.0	75.0	75	80.0	3	...	Cum.	
8.	E.N.	3	bc	2	29.934	79.8	74.8	75	80.0	3	Cir.	Cum.	
10.	E.N.	3	bc	...	29.942	79.5	74.8	76	80.0	4	...	Cum&Cum	
Midt.	E.N.	3	bc	...	29.940	79.0	74.0	75	80.0	5	...	Cum.	
Totals.	...	34	bcp	6	11149	113.0	56.4	81	118.9	38	Cir cum., Cir., & Str.	Cum.	
Mean.	E.N.	3		2	29.929	79.4	74.7	77	79.9	4			

## SUNDAY, 12TH.

2.	E.N.	2	bc	...	29.896	78.8	74.8	80	80.0	4	...	Cum.	At noon, lat. 8° 56' s. long. 151° 55' w. Temperature by self-registering thermo- meter, max. 79° 5, min. 73° 0. Current, s. 35° w. 23'. 4.30 A.M., zodiacal light very plain. Apex near $\gamma$ Geminorum. Sp. gr. 1.02662.
4.	N.E.	3	bc	...	29.906	78.8	74.3	78	80.0	7	...	Cum.&Str.	
6.	E.N.	5	cp	...	29.950	76.0	73.8	88	80.0	10	...	Cum.&Cmst	
8.	E.N.	2	cp	...	29.954	74.8	72.8	89	80.0	10	...	Cum.&Nb.	
10.	N.E.	0	bcp	...	29.970	75.8	74.3	91	80.0	5	...	Cum.&Nb.	
Noon.	E.N.	5	cp	...	29.937	74.8	74.3	97	80.0	10	...	Nimb.	
2.	N.E.	3	cp	...	29.900	78.3	74.8	81	80.0	10	...	Cum.	
4.	N.E.	2	bc	...	29.881	79.0	75.0	80	80.0	9	Cir cum.	Cum.&Nb.	
6.	N.E.	4	bc	...	29.909	78.3	73.8	77	79.7	9	...	Cum.&Cmst	
8.	N.E.	3	bcp	...	29.923	77.8	72.8	75	79.2	6	...	Cum.	
10.	N.E.	3	bc	...	29.956	78.8	73.8	75	79.7	4	Cir.	Cum.	
Midt.	E.N.	3	bc	...	29.966	78.3	73.8	77	79.7	6	Cir cum.	Cum.	
Totals.	...	35	bcp	...	11151	89.5	48.3	988	118.3	90	Cir cum.	Cum. & Nimb.	
Mean.	E.N.E.	3		...	29.929	77.5	74.0	82	79.9	8			

MONDAY, 13TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometrical reduced to 29.5 and Sea-Level.	Thermometer.		Humidity, Sat. to 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N.E.	4	bc	...	29.920	78.5	73.8	76	79.7	9	Cir cum.	Cum.	At noon, lat. 10° 8' s. long. 150° 50' w. Temperature by self-registering thermo- meter, max. 82° 5', min. 77° 0'. Current, s. 35° w. 24'.
4.	N.E.	3	c	...	29.918	78.5	73.5	75	79.7	10	Cir.	Cum.	
6.	N.E.	4	bc	...	29.917	78.3	73.8	77	79.7	8	Str.	Cir cum.	
8.	N.E.	3	bc	...	29.974	79.3	74.0	74	79.7	5	...	Cum.	
10.	E.N.	4	bc	...	29.993	80.8	74.8	72	80.0	4	Cir.	Cum.	
Noon.	E.N.	3	bc	...	29.963	81.8	75.3	70	80.0	4	...	Cm. & Str.	
2.	N.E.	3	bc	...	29.923	81.3	75.8	74	80.5	4	Cir str.	Cum.	
4.	N.E.	3	bep	...	29.918	78.3	74.8	81	80.0	8	...	Cm. & Nb.	
6.	E.N.	4	bc	...	29.914	79.3	74.8	78	80.0	3	Cir str.	Cum.	
8.	E.N.	1	bc	...	29.957	78.8	74.8	80	79.7	6	Cir cum.	Cum.	
10.	E.N.	4	bc	...	29.985	78.8	74.8	80	79.5	3	Cir.	Cum.	Numerous tern, petrel, and gannet, and one boatswain bird.
Midlt.	E.N.	1	bc	...	29.983	78.3	74.8	81	79.5	4	Cir.	Cum.	
Totals.	...	27	...	...	11425	112.0	55.0	78	118.0	68	Cir str. & Cir cum.	Cum.	
Mean.	E.N.E.	2	bep	...	29.952	79.3	74.6	76	79.8	6			

TUESDAY, 14TH.

2.	E.N.	1	bc	...	29.952	78.3	74.8	82	79.2	4	...	Cum.	At noon, lat. 11° 15' s. long. 150° 30' w. Temperature by self-registering thermo- meter, max. 82° 7', min. 76° 2'. Current, s. 63° w. 9'.
4.	S.E.	2	bc	...	29.942	77.8	74.3	81	79.2	6	...	Cum.	
6.	E.S.	1	bc	...	29.970	77.5	73.8	80	79.2	6	...	Str. & Cum.	
8.	E.S.	2	bc	...	29.980	78.8	74.8	80	79.5	3	...	Cum.	
10.	E.S.	1	bc	...	30.006	79.8	75.8	80	80.2	6	...	Cum.	
Noon.	E.N.	2	bc	...	29.986	81.0	76.0	76	80.5	6	...	Cum.	
2.	E.N.	1	bc	...	29.965	81.3	75.8	74	80.5	5	Cir.	Cm. & Nb.	
4.	E.N.	2	bc	1	29.975	81.3	75.3	72	80.5	4	Cir.	Cum.	
6.	E.N.	1	bc	...	29.954	79.3	74.5	74	80.0	4	Cir cum.	Str.	
8.	N.E.	2	bc	...	29.968	78.8	74.3	78	80.0	8	Cir cum.	Cum.	Several tern seen. Sp. gr. 1-02690.
10.	N.E.	1	bc	...	29.974	78.8	73.8	75	79.7	6	Cir cum.	Cum.	
Midlt.	N.E.	2	bc	...	29.966	78.3	73.8	77	79.5	4	...	Cm. & Str.	
Totals.	...	18	bc	...	11647	111.0	57.0	89	118.0	62	Cir. & Cir cum.	Cum., Str., & Nimb.	
Mean.	E.N.	1	1	1	29.971	79.2	74.7	77	79.8	5			

WEDNESDAY, 15TH.

2.	N.E.	1	bc	...	29.932	77.8	73.8	79	79.5	9	...	Cir. cum. & Cum.	At noon, lat. 12° 8' s. long. 150° 13' w. Temperature by self-registering thermo- meter, max. 83° 5', min. 76° 0'. Current, s. 13° w. 22'. Numerous large white tern. Sea covered with salpae, medusae, scapellum, &c. Sp. gr. 1-02691.
4.	N.E.	1	b	...	29.928	77.8	73.3	77	79.5	0	...	...	
6.	N.E.	1	bc	...	29.953	77.0	73.8	83	79.5	7	...	Cum.	
8.	N.E.	2	bc	...	29.980	79.0	74.3	76	79.5	2	...	Cum.	
10.	N.E.	1	bc	1	29.991	82.0	76.0	72	80.0	3	...	Cm & Cum. str.	
Noon.	Calm.	0	bc	...	29.955	82.0	75.0	68	80.7	3	...	Cm. & Cum. str.	
2.	N.N.E.	2	bc	...	29.993	79.8	75.0	76	80.2	8	...	Cm. & Str.	
4.	N.E.	3	bc	...	29.983	77.8	73.8	79	79.7	6	Cir.	Cm. & Str.	
6.	N.E.	2	c	...	29.923	77.5	73.8	80	79.5	9	...	Cum.	
8.	N.W. & W.	3	bc	...	29.941	77.8	74.3	81	79.5	8	...	Cum.	Numerous large white tern. Sea covered with salpae, medusae, scapellum, &c. Sp. gr. 1-02691.
10.	N.W. & W.	2	bc	...	29.941	77.0	73.5	81	79.2	7	...	Cum.	
Midlt.	N.W. & W.	1	bc	...	29.921	77.3	73.5	80	79.2	7	Cir str.	Cum.	
Totals.	...	19	bc	...	11251	102.8	50.1	92	116.0	69	Cir str.	Cum., Str., & Cum str.	
Mean.	N.N.E.	2	1	1	29.938	78.6	74.2	78	79.7	6			

## THURSDAY, 16TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNW <sup>1</sup> W.	1	bc	...	29.888	77.3	73.8	82	79.0	6	...	Cum. & St.	At noon, lat. 13° 28' s. long. 149° 30' w. Temperature by self-registering thermo- meter, max. 80°, min. 72°.
4.	WSW.	3	bc	...	29.881	76.5	73.5	84	79.0	8	...	Cum. & St.	
6.	SW <sup>1</sup> W.	1	bc	...	29.908	75.8	72.8	84	79.2	6	...	Cum. & St.	Current, E. 3'. 11 A.M., violent squall from the N.
8.	SW <sup>1</sup> W.	2	bc	...	29.943	76.3	72.8	82	79.0	9	...	Cum. & St.	
10.	SE <sup>1</sup> E.	1	bcp	...	29.957	76.3	73.8	87	79.0	7	...	Cum. & Nb.	Sp. gr. 1.02641.
Noon.	Variable.	7	cyp	...	29.925	73.8	71.8	89	79.0	10	...	Cum. & Nb.	
2.	Calm.	0	bc	...	29.878	78.5	74.8	80	80.0	5	Cir cum.	Cum.	Upper scud from s. w.
4.	Calm.	0	bc	...	29.871	78.5	74.0	77	80.2	7	Cum. & St.	Cum. & Nb.	
6.	ES <sup>1</sup> W.	1	bcp	...	29.892	76.0	72.8	83	79.0	3	Cir cum.	Cum.	
8.	SE <sup>1</sup> E.	2	bc	...	29.924	75.8	72.3	81	78.5	7	Cir.	Cum. & Nb.	
10.	SE <sup>1</sup> E.	1	e	...	29.945	76.3	72.3	79	78.5	10	Cir.	Cum.	
Midt.	SE <sup>1</sup> E.	1	bc	...	29.949	75.8	72.8	84	79.0	4	...	Cum.	
Totals.	...	20	bcp	...	10964	76.9	37.5	32	199.4	82	Cir., Cir cum., & St.	Cum., Str., & Nimb.	
Mean.	SW.	2		...	29.914	76.4	73.1	83	79.1	7			

## FRIDAY, 17TH.

2.	SE <sup>1</sup> E.	3	bc	...	29.880	75.5	72.0	82	78.5	7	...	Cum. & Nb.	At noon, lat. 15° 27' s. long. 149° 41' w. Temperature by self-registering thermo- meter, max. 80° 5', min. 73° 0'.
4.	SE <sup>1</sup> E.	1	bc	...	29.898	74.5	72.3	88	78.5	4	...	Cum.	
6.	E <sup>1</sup> S.	1	bc	...	29.937	74.0	71.0	84	78.5	2	...	Cum.	Current, s. 62° w. 12'.
8.	E <sup>1</sup> S.	0	bc	...	29.972	76.8	72.8	79	78.5	7	...	Cum. & Nb.	
10.	E <sup>1</sup> S.	2	bc	...	29.971	77.8	72.8	75	78.0	3	...	Cum. & Nb.	Sp. gr. 1.02710.
Noon.	SE <sup>1</sup> E.	1	bc	...	29.921	78.8	72.8	71	79.0	1	...	Cum.	
2.	E <sup>1</sup> S.	1	bc	...	29.911	77.3	72.3	75	79.7	1	...	Cum.	4.30 P.M., anchored in Papeete harbour, Tahiti island.
4.	Calm.	0	...	...	29.918	77.8	71.8	71	79.5	...	...	...	
6.	Calm.	0	bc	...	29.951	78.3	71.5	68	...	1	...	Cum.	
8.	SE <sup>1</sup> S.	0	bc	...	29.967	76.5	71.5	75	79.0	2	...	Str.	
10.	SE <sup>1</sup> E.	1	bc	...	30.008	76.8	71.8	75	79.0	3	...	Cum. & St.	
Midt.	SE <sup>1</sup> E.	1	bc	...	30.012	76.8	71.5	74	79.0	3	Cir.	Cum.	
Totals.	...	11	bc	...	11346	80.9	24.1	77	97.2	34	Cir.	Cum., Str., & Nimb.	
Mean.	SE <sup>1</sup> E.	1		...	29.915	76.7	72.0	76	78.8	3			

## SATURDAY, 18TH.

2.	SE <sup>1</sup> E.	1	bc	...	29.980	75.8	70.8	75	78.5	9	Cir cum.	Cum.	At noon, lat. 17° 14' s. long. 149° 42' w. Temperature by self-registering thermo- meter, max. 85°, min. 73° 2'.
4.	SE <sup>1</sup> E.	1	bc	...	29.954	75.3	70.3	71	78.0	2	...	Cum.	
6.	SE <sup>1</sup> E.	1	bc	...	29.984	74.5	70.3	78	78.0	2	...	Cum.	Sp. gr. 1.02710.
8.	SE <sup>1</sup> S.	1	bc	...	30.025	76.3	71.3	75	78.0	2	...	Cum. & St.	
10.	SE <sup>1</sup> E.	1	bc	...	30.045	78.3	72.8	73	78.2	4	Cir cum.	Cum.	4.30 P.M., anchored in Papeete harbour, Tahiti island.
Noon.	Calm.	0	bc	...	30.038	80.8	74.3	70	78.5	4	Cir cum.	Cum.	
2.	Calm.	0	bc	...	29.960	79.8	72.8	67	79.2	3	Cir str.	...	
4.	Calm.	0	bc	...	29.984	82.3	72.8	59	79.5	1	...	Cum.	
6.	Calm.	0	bc	...	30.012	78.8	70.8	63	...	1	...	Cum.	
8.	Calm.	0	b	...	30.057	75.0	69.8	73	...	0	...	...	
10.	Calm.	0	b	...	30.070	73.8	67.8	70	...	0	...	...	
Midt.	Calm.	0	b	...	30.066	73.3	67.3	70	...	0	...	...	
Totals.	...	5	bc	...	205	84.0	11.1	7	67.9	28	Cir cum.	Cum.	
Mean.	Calm.	0		...	30.017	77.0	70.9	71	78.5	2			

SUNDAY, 19TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea-Surface.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	be	...	30.019	71.3	65.8	71	...	2	Cir str.	...	At Tahiti. Temperature by self-registering thermo- meter, max. 83°, min. 68°.
4.	Calm.	0	be	...	30.009	70.8	64.8	69	...	1	Cir str.	...	
6.	Calm.	0	be	...	30.045	69.8	64.8	73	78.5	1	...	Cum.	
8.	Calm.	0	b	...	30.059	73.3	67.0	69	...	0	...	...	
10.	N.N.E.	1	b	...	30.073	77.5	70.8	68	...	0	...	...	
Noon.	N.N.E.	1	be	...	30.049	80.8	73.3	66	...	1	...	Cum.	
2.	...	...	...	...	...	...	...	...	...	...	...	...	
4.	N.N.E.	1	be	...	29.993	81.3	73.3	64	...	1	...	Cum.	
6.	N.N.E.	1	be	...	30.018	78.8	72.3	69	81.0	1	...	Cum.	
8.	Calm.	0	b	...	30.040	75.8	70.8	75	...	0	...	...	
10.	Calm.	0	b	...	30.070	74.8	69.8	74	...	0	...	...	
Midt.	Calm.	0	b	...	30.043	74.0	68.8	73	...	0	...	...	
Totals.	...	4	be	...	418	58.2	101.5	1	159.5	7	Cir str.	Cum.	
Mean.	Calm.	0		...	30.038	75.3	69.2	70	79.7	1			

MONDAY, 20TH.

2.	Variable.	1	be	...	30.019	72.8	67.3	72	...	1	...	Cum.	At Tahiti. Temperature by self-registering thermo- meter, max. 82°, min. 69°.
4.	Calm.	0	b	...	30.005	71.8	66.3	71	...	0	...	...	
6.	Calm.	0	b	...	30.042	71.8	66.3	71	78.7	0	...	...	
8.	Calm.	0	b	...	30.077	75.5	69.8	71	...	0	...	...	
10.	N.N.E.	1	be	...	30.081	78.2	72.3	70	...	4	Cir str.	Cum.	
Noon.	N.N.E.	1	...	...	30.051	80.8	73.5	67	...	...	...	...	
2.	N.N.E.	1	be	...	30.021	81.3	73.8	66	...	3	Cir str.	Cum.	
4.	N.N.E.	1	be	...	30.007	80.8	73.8	68	...	6	Cir str.	Cum.	
6.	N.N.E.	0	b	...	30.028	79.8	73.8	71	81.2	8	Cir cum.	Cum.	
8.	N.N.E.	1	bca	...	30.066	78.5	72.8	72	...	8	...	Cum.	
10.	Calm.	0	be	...	30.068	77.3	71.8	73	...	8	...	Cum.	
Midt.	Calm.	0	be	...	30.063	76.3	71.8	77	...	5	...	Cum.	
Totals.	...	6	be	...	528	84.9	13.3	9	159.9	43	Cir str.	Cum.	
Mean.	N.E.	1		...	30.044	77.1	71.1	71	79.9	4			

TUESDAY, 21ST.

2.	Calm.	0	be	...	30.033	75.8	70.8	75	...	6	...	Cum.	At Tahiti. Temperature by self-registering thermo- meter, max. 82° 5', min. 73° 0'.
4.	S.W.S.	1	be	...	30.025	75.8	70.3	73	...	8	...	Cum.	
6.	E.N.E.	1	be	...	30.053	74.8	71.5	83	78.0	8	...	Cum.	
8.	E.S.	1	be	...	30.066	77.0	72.3	76	...	8	...	Cm. & Str.	
10.	N.E.N.	2	be	...	30.077	80.3	73.3	67	...	6	Cir cum.	Cm. & Nb.	
Noon.	N.E.	4	be	...	30.060	80.8	73.8	68	...	8	Cir cum.	Cum.	
2.	Variable.	2	be	...	30.028	80.3	72.3	63	...	8	...	Cum.	
4.	N.N.E.	4	c	...	30.020	79.3	73.3	71	...	10	...	Cm. & Cm. st	
6.	E.N.E.	2	c	...	30.048	76.5	70.8	72	81.0	10	...	Nimb.	
8.	E.N.E.	1	be	...	30.069	76.3	70.3	71	...	8	...	Cum.	
10.	N.E.	1	be	...	30.070	75.8	70.8	75	...	2	...	Cum.	
Midt.	Calm.	0	b	...	30.071	74.8	69.8	74	...	0	...	...	
Totals.	...	19	be	...	620	87.5	19.3	28	159.0	82	Cir cum.	Cum., Str., & Nimb.	
Mean.	E.N.E.	2		...	30.052	77.3	71.6	72	79.5	7			

WEDNESDAY, 22D SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.058	73.8	69.3	77	...	3	Cir.	Cum.	At Tahiti. Temperature by self-registering thermo- meter, max. 84° 5, min. 70° 5.
4.	Calm.	0	bc	...	30.063	73.5	69.5	79	...	1	...	Cum.	
6.	Calm.	0	bc	...	30.093	72.3	68.3	79	78.0	1	...	Cum.	
8.	NE E.	1	bc	...	30.136	77.8	71.8	71	...	1	...	Cum.	
10.	NE E.	2	bc	...	30.139	79.3	72.8	69	...	4	...	Cum.	
Noon.	NE E.	3	bc	...	30.118	82.8	74.8	64	...	4	Cir.	Cum.	
2.	NE E.	2	bc	...	30.066	83.5	75.0	62	...	3	...	Cum.	
4.	NE E.	2	bc	...	30.046	83.3	72.8	56	...	1	...	Str.	
6.	NE E.	1	bc	...	30.063	81.0	73.3	65	79.0	2	...	Cm.&Str.	
8.	E by S.	1	bc	...	30.098	77.8	70.8	67	...	1	...	Cum.	
10.	NE E.	1	h	...	30.118	77.5	70.8	68	...	0	...	...	
Midlt.	Calm.	0	h	...	30.121	75.8	69.3	69	...	0	...	...	
Totals.	...	13	bc	...	1119	98.4	18.5	106	...	21	Cir.	Cum. & Str.	
Mean.	NE E.	1		...	30.093	78.2	71.5	69	78.5	2			

THURSDAY, 23D.

2.	Calm.	0	be	...	30.100	73.8	67.8	70	...	2	...	Cum.	At Tahiti. Temperature by self-registering thermo- meter, max. 84°, min. 70° 7.
4.	Calm.	0	b	...	30.082	73.8	67.8	70	...	0	...	...	
6.	Calm.	0	be	...	30.124	73.3	67.8	72	78.5	3	...	Cum.	
8.	Calm.	0	be	...	30.158	76.5	70.3	70	...	2	...	Cir cum.	
10.	NE E.	3	be	...	30.145	80.5	74.8	72	...	2	...	Cum.	
Noon.	NE E.	4	be	...	30.122	82.5	74.5	64	...	3	Cir cum.	Cum.	
2.	NE E.	4	be	...	30.063	82.5	75.3	67	...	4	Cir.	Cum.	
4.	E by N.	2	be	...	30.053	82.0	75.0	68	...	3	Cir.	Cum.	
6.	NE E.	2	c	...	30.076	81.8	75.3	70	79.7	9	...	Cum.	
8.	Calm.	0	b	...	30.129	79.9	73.5	73	...	0	...	...	
10.	Calm.	0	be	...	30.139	76.3	72.3	79	...	2	...	Cum.	
Midt.	Calm.	0	b	...	30.141	75.8	70.8	75	...	0	...	...	
Totals.	...	15	be	...	1332	97.8	25.2	10	18.2	30	Cir. & Cir cum.	Cum.	
Mean.	NE E.	1		...	30.111	78.1	72.1	71	79.1	2			

FRIDAY, 24TH.

2.	Calm.	0	b	...	30.098	74.8	69.8	74	...	0	...	...	At Tahiti. Temperature by self-registering thermo- meter, max. 83°, min. 70° 5.
4.	Calm.	0	b	...	30.077	73.8	68.8	74	...	0	...	...	
6.	Calm.	0	bc	...	30.081	72.5	68.5	79	78.7	1	...	Cum.	
8.	Calm.	0	bc	...	30.126	76.3	70.3	71	...	1	...	Cum.	
10.	E by N.	4	bc	...	30.119	78.8	71.8	67	...	3	...	Cum.	
Noon.	N E E.	4	bc	...	30.090	81.3	72.8	62	...	2	...	Cum.	
2.	N E E.	4	bc	...	30.066	81.8	72.8	60	...	3	Cir.	Cum.	
4.	N E E.	2	bc	...	30.047	81.3	71.8	58	...	5	Cir.	Cum.	
6.	Calm.	0	b	...	30.064	80.8	72.8	64	79.7	0	...	...	
8.	Calm.	0	b	...	30.119	76.3	70.8	73	...	0	...	...	
10.	Calm.	0	b	...	30.125	74.8	68.8	70	...	0	...	...	
Midn.	Calm.	0	b	...	30.110	72.8	66.8	70	...	0	...	...	
Totals.	...	14	bc	...	1122	85.3	5.8	102	18.4	15	Cir.	Cum.	
Mean.	N E E.	1		...	30.093	77.1	70.5	68	79.2	1			

## SATURDAY, 25TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.063	72.8	66.8	70	...	0	...	...	At Tahiti. Temperature by self-registering thermometer, max. 82° 5, min. 70°.
4.	Calm.	0	b	...	30.061	71.5	65.0	67	...	0	...	...	
6.	Calm.	0	bc	...	30.104	71.8	66.8	74	78.8	2	...	Cum.	
8.	Calm.	0	bc	...	30.150	75.8	70.8	75	...	4	...	Cum.	
10.	N.E. E.	12	bc	...	30.160	78.8	73.3	73	...	6	Cir.	Cum.	
Noon.	N.E. E.	3	bc	...	30.131	80.8	72.8	64	...	8	...	Cum.	
2.	N.E. E.	4	bc	...	30.082	80.5	73.8	68	...	9	...	Cum.	
4.	N.E. E.	12	bc	...	30.052	79.5	72.5	66	...	7	...	Cum.	
6.	N.E. E.	12	bc	...	30.069	78.8	70.8	63	80.0	4	...	Cum.	
8.	Calm.	0	b	...	30.125	75.8	70.3	73	...	0	...	...	
10.	Calm.	0	b	...	30.146	73.8	68.5	73	...	0	...	...	
Midt.	Calm.	0	bc	...	30.123	73.8	68.8	74	...	1	...	Cum.	
Totals.	...	13	bc	...	1276	73.7	0.2	840	158.8	41	Cir.	Cum.	
Mean.	N.E. E.	1		...	30.106	76.1	70.0	70	79.4	3			

## SUNDAY, 26TH.

2.	E.S.	1	bc	...	30.116	73.8	67.8	70	...	1	...	Cum.	At Tahiti. Temperature by self-registering thermometer, max. 83°, min. 72° 5.
4.	E.S.	0	bc	...	30.098	72.3	66.8	72	...	1	...	Cum.	
6.	Calm.	0	bc	...	30.118	72.8	68.3	76	79.0	4	...	Cum.	
8.	Calm.	0	bc	...	30.152	75.5	70.8	75	...	5	...	Cum.	
10.	Variable.	1	bc	...	30.168	79.0	73.8	74	...	5	...	Cum.	
Noon.	N.E. E.	4	bcq	...	30.120	82.0	73.5	62	...	6	Cir.	Cum.	
2.	N.E. E.	4	bcq	...	30.066	82.0	73.8	63	...	1	Cir.	Cum.	
4.	N.E. E.	3	bcq	...	30.056	80.8	73.8	68	...	2	Cir.	Cum.	
6.	Calm.	0	b	...	30.049	78.8	71.8	67	80.2	0	...	...	
8.	Calm.	0	b	...	30.053	76.8	70.8	71	...	0	...	...	
10.	Calm.	0	b	...	30.090	75.3	69.8	72	...	0	...	...	
Midt.	Calm.	0	bc	...	30.121	74.3	68.8	72	...	1	...	Cum.	
Totals.	...	13	bcq	...	1207	83.4	9.8	2	159.2	26	Cir.	Cum.	
Mean.	E.N.E.	1		...	30.101	76.9	70.8	70	79.6	2			

## MONDAY, 27TH.

2.	Calm.	0	bc	...	30.094	74.8	68.8	70	...	3	...	Cum.	At Tahiti. Temperature by self-registering thermometer, max. 80° 5, min. 72° 5.
4.	Calm.	0	bc	...	30.076	74.3	68.8	72	...	3	...	Cum.	
6.	Calm.	0	bc	...	30.103	73.8	68.3	72	79.0	4	Cir.	Cum.	
8.	Calm.	0	bc	...	30.126	77.8	70.8	67	...	4	Cir.	Cum.	
10.	N.E. E.	2	bc	...	30.130	79.3	73.8	73	...	5	Cir.	Cum.	
Noon.	N.E. E.	3	bc	...	30.115	79.8	73.8	71	...	5	Cir.	Cum.	
2.	N.E. E.	4	bcq	...	30.066	79.8	72.8	67	...	7	...	Cum.	
4.	N.E. E.	3	bcq	...	30.048	78.8	72.8	71	...	6	...	Cum.	
6.	N.E. E.	1	bc	...	30.064	78.0	72.5	73	80.0	5	Cir.	Cum.	
8.	Calm.	0	bc	...	30.109	74.8	69.8	74	...	2	...	Cum.	
10.	Calm.	0	b	...	30.115	72.3	68.8	82	...	0	...	...	
Midt.	Calm.	0	b	...	30.115	71.8	67.3	76	...	0	...	...	
Totals.	...	13	bcq	...	1161	75.3	8.3	28	...	44	Cir.	Cum.	
Mean.	N.E. E.	1		...	30.097	76.3	70.7	72	79.5	4			

TUESDAY, 28TH SEPTEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.082	71.3	66.8	76	...	0	...	...	At Tahiti. Temperature by self-registering thermometer, max. 81°, min. 70°.
4.	N.E.E.	12	b	...	30.078	71.3	66.8	76	...	0	...	...	
6.	Calm.	0	b	...	30.085	70.8	66.3	76	79.2	0	...	...	
8.	Calm.	0	b	...	30.139	75.8	69.8	71	...	3	...	Cum.	
10.	N.E.E.	12	bc	...	30.113	78.8	72.5	70	...	4	...	Cum.	
Noon.	N.E.E.	12	bc	...	30.081	79.8	71.8	63	...	4	...	Cum.	
2.	N.E.E.	1	bc	...	30.040	80.3	72.8	65	...	4	...	Cum.	
4.	N.N.E.	1	bc	...	30.032	79.3	72.5	68	...	3	...	Cum.	
6.	Calm.	0	bc	...	30.066	78.3	72.3	71	80.0	3	...	Cum.	
8.	Calm.	0	b	...	30.090	75.8	70.8	75	...	0	...	...	
10.	Calm.	0	b	...	30.111	73.8	68.8	74	...	0	...	...	
Midt.	Calm.	0	bc	...	30.103	72.8	68.8	79	...	2	Cir.	...	
Totals.	...	8	bc	...	1016	68.1	69.0	24	159.2	23	Cir.	Cum.	
Mean.	S.E.	1		...	30.085	75.7	70.0	72	79.6	2			

WEDNESDAY, 29TH.

2	Calm.	0	b	...	30.071	71.0	65.8	72	...	0	...	...	At Tahiti. Temperature by self-registering thermo- meter, max. 80° 5', min. 69° 5'.
4	Calm.	0	b	...	30.060	70.5	65.3	72	...	0	...	...	
6	S.E.S.	1	bc	...	30.072	70.3	66.8	81	79.0	3	...	Cum.	
8	Calm.	0	bc	...	30.098	74.8	69.8	74	...	3	...	Cum.	
10.	N.E.E.	1	bc	...	30.096	78.3	71.3	67	...	2	...	Cum.	
Noon.	N.E.E.	0	bc	...	30.095	79.5	71.8	64	...	3	...	Cum.	
2	N.E.E.	3	bc	...	30.050	79.8	71.8	63	...	3	...	Cum.	
4	N.E.E.	2	bc	...	30.031	78.8	71.3	65	...	3	...	Cum.	
6	N.E.E.	1	bc	...	30.052	77.5	71.5	71	80.0	3	Cir.	Cum.	
8	Calm.	0	b	...	30.110	74.8	69.8	74	...	0	...	...	
10.	Calm.	0	b	...	30.126	72.8	67.8	74	...	0	...	...	
Midt.	Calm.	0	b	...	30.129	71.3	66.8	76	...	0	...	...	
Totals.	...	8	bc	...	990	59.4	109.8	13	...	20	Cir.	Cum.	
Mean.	E.N.E.	1		...	30.083	74.9	69.1	71	79.5	2			

THURSDAY, 30TH.

2.	E.S.	1	b	...	30.123	70.8	64.8	69	...	0	...	...	At Tahiti. Temperature by self-registering thermo- meter, max. 83°, min. 78° 5'.
4.	E.S.	1	b	...	30.123	70.8	64.8	69	...	0	...	...	
6.	Calm.	0	bc	...	30.142	70.5	65.5	73	79.2	1	Cir.	Cum.	
8.	Calm.	0	bc	...	30.172	74.8	68.8	70	...	1	Cir.	Cum.	
10.	W.S.	1	bc	...	30.170	77.8	69.8	63	...	1	...	Cum.	
Noon.	N.E.E.	2	bc	...	30.151	78.8	72.3	69	...	1	...	Cum.	
2.	N.E.E.	2	bc	...	30.122	80.8	72.8	64	...	1	...	Cum.	
4.	...	...	bc	...	30.106	81.3	72.8	62	...	2	...	Cum.	
6.	W.S.	1	...	...	30.104	79.8	72.8	67	80.0	...	...	Cum.	
8.	Calm.	0	b	...	30.133	76.0	69.8	70	...	0	...	...	
10.	Variable.	1	b	...	30.171	74.8	67.3	64	...	0	...	...	
Midt.	Variable.	0	b	...	30.157	74.8	66.8	62	...	0	...	...	
Totals.	...	9	bc	...	1674	71.0	108.3	82	...	7	Cir.	Cum.	
Mean	Variable.	1		...	30.139	75.9	69.0	67	79.6	1			

## FRIDAY, 1st OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 4 to 9	Barometer re- duced to 32° and Sea-Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 4 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30-122	73.8	67.8	70	...	0	...	...	At Tahiti. Temperature by self-registering thermo- meter, max. 83°, min. 73° 5.
4.	Calm.	0	b	...	30-114	73.8	67.3	68	...	0	...	...	
6.	Calm.	0	bc	...	30-131	71.8	68.8	84	79.5	3	...	Cum.	
8.	N.E. by E.	1	bc	...	30-170	75.8	69.8	71	...	4	...	Cum.	
10.	N.E. by E.	2	bc	...	30-172	81.3	75.0	71	...	5	...	Cum.	
Noon.	N.E. by E.	2	bc	...	30-167	82.0	75.0	68	...	5	...	Cum.	
2.	N.E. by E.	2	bc	...	30-122	80.8	74.3	70	...	5	...	Cum.	
4.	N.E. by E.	2	bc	...	30-112	81.8	73.8	64	...	3	...	Cum.	
6.	N.E. by E.	2	bc	...	30-145	79.3	73.8	73	80.2	2	...	Cum.	
8.	Calm.	0	bc	...	30-166	77.8	72.8	75	...	2	...	Cum.	
10.	Calm.	0	b	...	30-181	75.8	71.3	77	...	0	...	...	Totals.
Midd.	Calm.	0	b	...	30-171	75.3	70.8	77	...	0	...	...	
Totals.	...	11	bc	...	777.4	89.3	29.5	28	159.7	33	...	Cum.	
Mean.	N.E. by E.	1		...	30-148	77.4	71.7	72	79.8	3			

## SATURDAY, 2d.

2.	S.E. by S.	1	b	...	30-148	74.8	71.3	81	...	0	...	...	At Tahiti. Temperature by self-registering thermo- meter, max. 81°, min. 72°.
4.	Calm.	0	bcp	...	30-134	74.8	71.8	84	...	0	...	Cum.	
6.	Calm.	0	bc	...	30-127	74.3	70.8	82	79.2	4	...	Cum.	
8.	Calm.	0	bc	...	30-137	78.8	73.8	75	...	3	...	Cum.	
10.	N.W. by W.	1	bc	...	30-139	79.3	74.8	78	...	4	...	Cum.	
Noon.	N.W. by W.	2	bc	...	30-131	80.3	75.0	74	...	4	...	Cum.	
2.	N.E. by E.	1	bc	...	30-054	78.3	74.5	80	...	6	...	Cum.	
4.	E.S.E.	3	bc	...	30-035	78.3	74.8	81	...	7	...	Cum. & Xb.	
6.	E.S.E.	1	bc	...	30-050	77.8	74.8	84	79.0	8	...	Cum.	
8.	Calm.	0	bcp	...	30-069	77.0	73.0	79	...	7	...	Cum.	
10.	Calm.	0	bc	...	30-105	75.8	72.8	84	...	4	...	Cum.	Totals.
Midd.	Calm.	0	bcp	...	30-086	74.8	72.8	89	...	6	...	Cum.	
Totals.	...	9	bcp	...	725.3	84.3	49.2	11	...	59	...	Cum.	
Mean.	Variable.	1		...	30-104	77.0	73.3	81	79.1	5			

## SUNDAY, 3d.

2.	Calm.	0	bc	...	30-082	74.3	72.8	91	...	4	...	Cum.	At noon, lat. 17° 28' S. long. 149° 40' W. Temperature by self-registering thermo- meter, max. 86°, min. 71°. 9 a.m., left Papeete harbor.
4.	Calm.	0	bc	...	30-059	72.8	70.8	89	...	2	...	Cum.	
6.	Calm.	0	bc	...	30-079	72.3	69.8	87	79.5	3	Cir.	Cum.	
8.	Calm.	0	bc	...	30-109	76.0	72.8	83	...	2	Cir.	Cum.	
10.	...	...	...	...	...	...	...	...	...	...	...	...	
Noon.	N.W. by E.	3	bcp	...	30-087	76.8	74.8	89	78.0	7	...	Cum. & Xb.	
2.	N.W. by E.	6	bcp	...	30-065	74.8	72.3	87	78.0	10	...	Cum. & Xb.	
4.	S.W.	1	bc	...	30-044	76.8	73.3	81	78.0	5	...	Cum. & Str.	
6.	S.W. by S.	1	bc	...	30-071	77.8	74.3	82	78.0	6	...	Cum. & Str.	
8.	E.S.E.	3	bc	...	30-070	76.8	73.8	84	78.0	4	...	Cum. & Str.	
10.	E.S.E.	5	bcp	...	30-113	76.8	73.8	84	78.0	7	...	Cum.	Totals.
Midd.	E.S.E.	4	bc	...	30-109	76.5	74.0	87	78.0	3	...	Cum.	
Totals.	...	23	bcp	...	889	61.7	32.5	64	15	53	Cir.	Cum., Str., & Nimb.	
Mean.	Variable.	2		...	30-081	75.6	72.9	86	78.2	5			

## MONDAY, 4TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>b</sup> S <sup>1</sup> S.	4	bc	...	30.067	75.3	72.8	87	77.5	5	...	Cm.&Cm str.	At noon, lat. 18° 40' s. long. 149° 52' w. Temperature by self-registering thermo- meter, max. 79° 5, min. 79° 2. Current, s. 73° w. 13'.  Sp. gr. 1.02719.
4.	E <sup>1</sup> S.	4	ocq	3	30.077	75.3	72.8	100	77.5	10	...	Cm.&Cm str.	
6.	E <sup>1</sup> S.	3	ocp	...	30.116	72.8	72.5	98	77.5	10	...	Str.&Cm.	
8.	E <sup>1</sup> S.	3	ocp	...	30.154	73.3	73.3	100	77.5	10	...	Str.&Cm.	
10.	E <sup>1</sup> S.	3	bc	3	30.123	76.3	72.8	81	77.5	6	Cir str.	Str.&Cm.	
Noon.	E <sup>1</sup> S.	3	e	4	30.119	76.3	72.8	84	77.5	9	...	Str.&Cm.	
2.	E <sup>1</sup> S.	4	bc	4	30.075	77.8	73.8	79	77.5	8	Cir str.	Cir.	
4.	E <sup>1</sup> S.	3	bc	3	30.054	77.8	73.5	78	77.5	8	Cir.	Cir.	
6.	E <sup>1</sup> S.	3	bc	3	30.121	76.3	72.8	82	77.0	8	Cir cum.	Cm.&Str.	
8.	E <sup>1</sup> S.	3	bc	...	30.143	75.8	71.8	79	76.5	8	Cir cum.	Cm.&Str.	
10.	E <sup>1</sup> S.	3	bc	...	30.153	75.8	72.3	81	76.5	6	...	Cum.	
Midt.	E <sup>1</sup> S.	3	bc	3	30.156	75.3	71.8	81	76.2	4	...	Cum.	
Totals.	...	40	bcq	23	1358	66.1	34.0	1030	16	92	Cir str. & Cir cum.	Cum., Str., & Cum str.	
Mean.	E <sup>1</sup> S.	3		3	30.113	75.5	72.8	86	77.1	8			

## TUESDAY, 5TH.

2.	E <sup>b</sup> S <sup>1</sup> S.	4	bc	...	30.104	74.8	72.3	87	76.0	4	...	Cum.	At noon, lat. 20° 59' s. long. 150° 12' w. Temperature by self-registering thermo- meter, max. 79° 5, min. 72° 7. Current, s. 60° w. 6'.  Sp. gr. 1.02706.
4.	E <sup>1</sup> S.	3	bc	3	30.077	74.8	72.3	87	76.0	3	...	Cum.	
6.	E <sup>1</sup> S.	4	bc	3	30.126	74.3	71.3	81	76.2	6	...	Cum.	
8.	E <sup>1</sup> S.	5	bc	...	30.175	75.3	70.8	77	75.5	6	...	Cum.	
10.	E <sup>1</sup> S.	4	bc	...	30.185	76.3	72.5	80	75.5	8	Cir cum.	Cum.	
Noon.	E <sup>1</sup> S.	3	bc	...	30.162	77.5	73.0	77	75.2	9	Cir cum.	Cum.	
2.	E <sup>1</sup> S.	3	bc	...	30.112	78.8	73.8	75	75.5	4	Cir cum.	Cum.	
4.	E <sup>1</sup> S.	2	bc	...	30.087	76.8	72.8	79	75.0	3	Cir cum.	Cm.&Str.	
6.	E <sup>1</sup> S.	2	bc	...	30.097	74.8	71.8	79	75.0	5	Cir cum.	Cm.&Str.	
8.	E <sup>1</sup> S.	2	bc	...	30.114	74.8	71.8	81	75.0	3	Cir.	Cum.	
10.	E <sup>1</sup> S.	3	bc	...	30.127	74.0	71.8	88	75.0	4	Cir.	Cum.	
Midt.	E <sup>1</sup> S.	3	b	...	30.109	74.3	71.0	83	75.0	0	...	...	
Totals.	...	38	bc	6	1475	67.5	25.2	20	64.9	55	Cir. & Cir cum.	Cum. & Str.	
Mean.	E <sup>1</sup> S.	3		3	30.123	75.6	72.1	82	75.4	5			

## WEDNESDAY, 6TH.

2.	NE <sup>1</sup> E.	3	bc	...	30.081	75.3	70.8	87	75.0	6	...	Cm.&Nb.	At noon, lat. 22° 21' s. long. 150° 17' w. Temperature by self-registering thermo- meter, max. 78°, min. 71° 5. Current, s. 23° w. 24'.  Sp. gr. 1.02690.
4.	EN <sup>1</sup> S.	2	bc	...	30.059	72.8	69.8	84	75.0	6	...	Cm.&Nb.	
6.	NE <sup>1</sup> E.	2	bc	...	30.071	72.8	70.8	89	...	7	...	Cm.&Str.	
8.	NE <sup>1</sup> E.	2	bc	...	30.105	73.8	70.8	84	74.5	6	...	Cum.	
10.	NE <sup>1</sup> E.	2	bcp	...	30.111	73.8	71.8	89	74.5	8	Cir.	Cum.	
Noon.	EN <sup>1</sup> S.	2	bc	...	30.075	75.3	71.8	82	74.5	7	Cir.	Cum.	
2.	NE <sup>1</sup> S.	2	bcp	...	30.026	76.5	72.8	80	74.5	7	...	Cm.&Str.	
4.	EN <sup>1</sup> S.	1	bc	...	30.008	74.3	70.8	82	74.0	9	...	Cm.&Str.	
6.	NE <sup>1</sup> E.	2	bc	...	30.047	74.3	70.8	82	74.2	8	...	Cum.	
8.	EN <sup>1</sup> S.	2	bc	...	30.049	74.0	70.5	81	74.5	5	...	Cum.	
10.	NE <sup>1</sup> E.	3	bc	...	30.060	74.3	69.8	77	74.5	10	...	Cum.	
Midt.	NE <sup>1</sup> E.	2	e	2	30.046	72.8	70.3	86	74.5	9	...	Cum.	
Totals.	...	25	bcp	4	738	48.0	10.8	43	49.7	88	Cir.	Cum., Str., & Nimb.	
Mean.	NE <sup>1</sup> E.	2		2	30.061	74.0	70.9	84	74.5	7			

## THURSDAY, 7TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Do. Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.E.	2	bc	...	30.001	72.8	69.8	84	74.0	7	Str.	Cum.	At noon, lat. 23° 41' S. long. 150° 37' W. Temperature by self-registering thermometer, max. 73° 5, min. 67° 5. Current, S. 7'. A boatswain bird seen. Long S.E. swell. Cum. & Nub. clouds from S.S.E. Sp. gr. 1.02682.
4.	N.E.	0	bc	...	29.982	71.8	70.8	94	...	9	Str.	Cum.	
6.	Variable.	3	cp	...	30.027	69.3	68.8	97	73.5	9	...	Cum. & Str.	
8.	N.E.	2	bc	...	30.039	70.5	68.0	85	74.0	4	Cir str.	Cum. & Str.	
10.	N.E.	2	bc	...	30.036	73.8	70.8	84	74.0	8	...	Cum. & Str.	
Noon.	N.W. by S.	4	beqq	...	30.019	70.8	70.0	95	74.0	10	...	Cum. & Cumst.	
2.	Variable.	0	cp	...	29.995	72.3	71.3	94	73.2	9	...	Cum. & Nub.	
4.	sw by w.	3	cp	...	29.965	70.3	69.8	97	73.0	10	...	Cumst. & Nub.	
6.	sw by w.	4	bc	...	30.012	71.3	68.5	84	72.5	6	Cir.	Cum.	
8.	sw by w.	3	bc	...	30.012	70.8	67.8	83	72.7	4	...	Cum.	
10.	sw by w.	4	bc	...	30.020	70.8	67.8	83	72.0	5	...	Cum.	
Midd.	sw by w.	3	beq	...	30.007	70.3	66.5	79	72.0	3	...	Cum.	
Totals.	...	30	...	...	115	41.8	109.9	1059	34.9	84	Cir. & Str.	Cum., Str., Cumstr., & Nub.	
Mean.	Variable.	2	beqq	...	30.009	71.2	69.2	88	73.2	7	...	...	

## FRIDAY, 8TH.

2.	sw by w.	5	beq	...	29.935	69.8	66.3	81	72.0	6	...	Cum.	At noon, lat. 24° 53' S. long. 147° 54' W. Temperature by self-registering thermometer, max. 71° 5, min. 67° 0. Current S. 11'. Long swell from S. A few flying fish. Sp. gr. 1.02662.
4.	sw by w.	4	bc	3	29.939	69.5	65.8	79	72.2	1	...	Cum.	
6.	sw by w.	5	beq	...	29.977	68.8	63.8	73	72.0	3	...	Cum.	
8.	sw by w.	4	bc	...	29.993	68.8	63.8	73	71.7	6	...	Cum. & Str.	
10.	sw by w.	5	beq	4	30.003	68.3	63.8	75	71.5	4	...	Cum. & Str.	
Noon.	sw by w.	4	beq	...	29.976	67.8	63.3	75	70.5	5	...	Cum.	
2.	sw by w.	5	beq	...	29.898	69.8	63.8	69	70.2	6	...	Cum.	
4.	sw by w.	4	beq	...	29.895	66.8	63.8	83	70.0	8	...	Cum. & Str.	
6.	sw by w.	6	beq	5	29.938	66.0	62.0	78	71.0	7	...	Cum.	
8.	sw by w.	4	bc	...	29.943	69.5	62.3	77	71.0	3	...	Cum.	
10.	sw by w.	5	beq	...	29.955	69.3	62.3	78	71.0	7	...	Cum.	
Midd.	sw by w.	4	beq	...	29.965	65.3	60.8	76	71.0	2	...	Cum.	
Totals.	...	55	beqq	12	1147	93.7	41.8	77	141	58	...	Cum. & Str.	
Mean.	sw by w.	5	beqq	4	29.951	67.8	63.5	76	71.2	5	...	...	

## SATURDAY, 9TH.

2.	sw by w.	4	beq	5	29.909	65.8	62.5	82	69.0	9	...	Cum.	At noon, lat. 26° 9' S. long. 145° 17' W. Temperature by self-registering thermometer, max. 70°, min. 62° 5. Current S. 41' E. 23'. One white albatross seen. Sp. gr. 1.02640.
4.	sw by w.	7	beq	6	29.897	64.8	61.3	80	68.0	3	...	Cum.	
6.	sw by w.	5	bc	5	29.881	63.8	61.3	85	68.5	6	...	Cum.	
8.	sw by w.	7	bc	5	29.899	64.8	61.8	83	68.0	3	...	Cum.	
10.	sw by w.	5	bc	...	29.909	67.5	61.8	69	68.5	3	...	Cum.	
Noon.	sw by w.	4	bc	...	29.913	68.3	63.5	74	68.5	7	...	Cum str.	
2.	sw by w.	5	bc	...	29.894	67.3	63.3	78	68.5	5	...	Cum. & Str.	
4.	sw by w.	4	bc	5	29.865	66.8	63.3	81	68.5	8	...	Cum. & Str.	
6.	sw by w.	6	beqq	4	29.818	65.3	62.5	84	68.0	5	...	Cum.	
8.	sw by w.	4	bc	4	29.845	65.8	63.3	85	70.0	7	...	Cum.	
10.	sw by w.	6	beq	...	29.814	65.8	62.8	83	69.7	7	...	Cum. & Str.	
Midd.	sw by w.	4	beq	...	29.835	65.8	63.3	85	69.7	4	...	Cum.	
Totals.	...	61	beqq	39	10509	71.8	30.7	9	104.9	67	...	Cum. & Str.	
Mean.	sw by w.	6	beqq	5	29.876	66.0	62.6	81	68.7	6	...	...	

SUNDAY, 10TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.				Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Upper. Lower.	
2.	s. w.	4	bcpp	...	29.841	64.0	61.8	87	68.0	6	...	At noon, lat. 27° 39' s. long. 142° 47' w. Temperature by self-registering thermometer, max. 72°, min. 62°. Current s. 70° E. 21'. 3 A.M., heavy squall with rain. Stormy petrel, tern, and Cape pigeon seen. Sp. gr. 1.02634.
4.	s. w.	6	bcpp	...	29.831	63.8	62.8	94	68.0	7	...	
6.	s. w.	4	bcq	5	29.858	64.5	61.8	83	68.0	6	...	
8.	s. w.	6	bcpp	4	29.851	63.8	61.3	85	67.5	9	...	
10.	s. s. w.	4	bc	3	29.887	65.8	61.3	75	68.0	1	...	
Noon.	s. s. w.	5	bc	3	29.856	66.3	62.0	77	68.5	8	...	
2.	s. w. s.	4	bc	3	29.848	68.0	62.0	68	68.8	2	...	
4.	s. w.	3	bc	3	29.818	68.8	63.8	73	69.0	4	...	
6.	s. w. s.	3	bc	3	29.884	66.3	62.5	79	69.0	4	...	
8.	s. w. s.	3	bc	...	29.897	65.8	62.5	82	67.5	8	...	
10.	s. w. s.	3	bc	...	29.935	65.8	62.8	83	68.0	9	...	
Midt.	s. w. s.	3	bc	2	29.949	64.8	61.3	81	67.5	3	...	
Totals.	...	48	bcpp	26	10185	67.7	62.9	7	97.8	67	...	Cum., Str., & Cum str.
Mean.	s. w. s.	4		3	29.874	65.6	62.2	81	68.1	6	...	

MONDAY, 11TH.

2.	s. w.	2	bc	...	29.901	64.8	61.8	83	67.0	5	...	At noon, lat. 28° 22' s. long. 141° 22' w. Temperature by self-registering thermometer, max. 72°, min. 63°. Current s. 13'. A large white albatross seen. Swell from w. Sp. gr. 1.02639.
4.	s. w.	1	bc	...	29.901	64.8	60.8	78	67.9	3	...	
6.	w. n. s.	2	bc	2	29.962	64.5	62.3	87	67.7	8	...	
8.	s. w. s.	1	bc	...	29.989	64.3	62.3	88	67.5	8	...	
10.	w. s.	1	bc	...	30.012	67.8	63.5	77	68.0	6	...	
Noon.	w. n. s.	3	bcq	...	29.902	67.8	63.0	74	68.0	8	...	
2.	w. n. s.	2	bc	...	29.995	67.5	62.8	74	67.7	8	...	
4.	w. n. s.	2	bc	...	29.987	67.8	62.5	72	67.5	4	...	
6.	w. n. s.	2	bc	2	29.934	67.8	62.5	72	67.0	4	...	
8.	s. w. s.	2	bc	...	29.945	67.0	62.8	77	67.2	5	...	
10.	s. w. s.	2	bc	...	30.051	66.8	63.0	79	66.5	3	...	Cum., Str., & Nimb.
Midt.	s. w. s.	2	bc	1	30.093	66.8	63.3	81	66.5	6	...	
Totals.	...	22	bcq	5	11999	77.7	30.6	102	87.6	63	...	Cum., Str., & Nimb.
Mean.	w.	2		2	30.000	66.5	62.5	79	67.3	6	...	

TUESDAY, 12TH.

2.	s. w. s.	1	bc	...	30.066	66.3	63.3	83	66.5	6	...	At noon, lat. 29° 25' s. long. 140° 23' w. Temperature by self-registering thermometer, max. 78°, min. 65°. Current s. 50° E. S'. One boatwain bird seen. s. w. swell. Sp. gr. 1.02650.
4.	s. w. s.	2	bc	...	30.066	65.8	63.3	85	66.5	2	...	
6.	s. w. s.	2	bc	1	30.098	66.3	63.8	85	66.5	1	...	
8.	s. w. s.	2	bc	...	30.146	67.0	64.3	84	66.2	1	...	
10.	s. w. s.	3	bc	...	30.163	68.8	65.3	81	67.0	1	...	
Noon.	s. w. s.	2	bc	...	30.168	71.0	66.8	77	67.2	1	...	
2.	s. w.	2	bc	...	30.145	73.5	68.5	74	66.2	1	...	
4.	s. w.	1	bc	...	30.143	74.0	68.8	73	66.2	1	...	
6.	s. w.	2	bc	2	30.161	70.3	66.8	81	66.2	1	...	
8.	s. w.	1	bc	...	30.167	67.8	65.8	88	65.5	1	...	Cum., Str., & Cum.
10.	s. w.	1	bc	...	30.195	66.8	65.3	91	66.0	3	...	
Midt.	s. w.	1	bcw	...	30.209	66.8	64.8	88	66.0	2	...	Cum., Str., & Cum.
Totals.	...	20	bc	3	1727	1014	66.8	30	76.0	21	...	
Mean.	s. w.	2		1	30.144	68.7	65.6	82	66.3	2	...	

## WEDNESDAY, 13TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer, reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N <sup>W</sup> by N.	1	bc	12	30.182	66.8	65.3	93	66.0	12	Cir cum.	Cum.	At noon, lat. 30° 56' S., long. 139° 8' W. Temperature by self-registering thermo- meter, max. 73° 2', min. 64°. Current, S. 12° E. 13'.
4.	N <sup>W</sup> by E.	3	bc	12	30.177	67.3	65.8	91	66.0	8	Cir cum.	Cum.	
6.	N <sup>W</sup> by W.	1	e	...	30.201	65.8	63.5	87	66.0	9	Cir cum.	Cum. & Str.	
8.	N. W.	3	bep	...	30.221	66.8	63.3	81	66.0	9	Cir str.	Str.	Clouds all high from N. W. Sp. gr. 1.02631.
10.	N <sup>W</sup> by W.	12	bc	...	30.203	68.0	65.8	87	66.0	13	...	St. & Cum str.	
Noon.	N <sup>W</sup> by E.	3	bc	...	30.195	69.3	66.8	85	66.5	7	Cir str.	Str.	
2.	N <sup>W</sup> by E.	3	bc	...	30.169	69.8	66.8	83	66.5	7	Cir str.	Str.	
4.	N. N. W.	12	bc	...	30.154	69.5	66.8	84	66.2	8	Cir str.	Cum. & Str.	
6.	N <sup>W</sup> by W.	3	e	...	30.171	68.3	67.3	94	66.2	10	...	...	
8.	N <sup>W</sup> by N.	3	bc	...	30.149	66.8	64.8	88	65.0	7	Cir.	Cum. & Str.	
10.	N <sup>W</sup> by N.	3	bc	...	30.167	65.8	63.8	88	65.5	9	Cir str.	Cum. & Str.	
Midt.	N <sup>W</sup> by N.	1	bc	...	30.148	66.0	64.3	89	65.5	9	Cir str.	Str.	
Totals.	...	28	bep	4	2140	90.2	64.3	90	71.4	91	Cir str. & Cir cum.	Cum. & Str.	
Mean.	N.	2		12	30.178	67.5	65.4	87	65.9	8			

## THURSDAY, 14TH.

2.	N.	3	e	...	30.127	66.3	64.8	91	65.0	10	...	Cum. & Str.	At noon, lat. 32° 36' S., long. 137° 49' W. Temperature by self-registering thermo- meter, max. 68°, min. 62° 5'. Current, S. 44° E. 10'.
4.	N <sup>W</sup> by N.	3	e	...	30.097	65.8	61.8	94	64.5	10	...	Cum. & Str.	
6.	N <sup>W</sup> by W.	3	e	...	30.109	66.5	65.3	93	65.0	10	...	Str.	
8.	N <sup>W</sup> by E.	3	e	12	30.141	66.3	65.3	94	65.0	10	...	St. & Cum str.	Three albatross seen. Sp. gr. 1.02627.
10.	N. W.	3	e	...	30.139	67.3	65.8	91	65.0	10	...	Cum str.	
Noon.	N <sup>W</sup> by W.	3	cp	12	30.156	64.8	62.8	88	64.7	10	...	Cum str.	
2.	N <sup>W</sup> by S.	3	e	...	30.131	66.8	63.3	81	64.7	10	...	Cum str.	
4.	N. W.	12	e	...	30.126	65.3	60.3	82	...	10	...	Cum str.	
6.	N. S. W.	3	e	...	30.182	65.8	59.3	75	63.7	10	...	Cum. & Str.	
8.	N. S. W.	3	bep	...	30.230	62.8	59.8	82	63.5	9	...	Cum. & Str.	
10.	N. S. W.	5	bc	...	30.247	61.8	58.3	80	63.5	6	Cir cum.	Cum.	
Midt.	N <sup>W</sup> by W.	5	bc	...	30.236	60.8	56.8	77	63.0	7	Cir str.	Cum.	
Totals.	...	39	bep	6	1911	56.3	26.6	68	47.6	112	Cir cum. & Cir str.	Cum., Str., & Cum str.	
Mean.	Variable.	3		2	30.159	64.7	62.2	86	61.3	9			

## FRIDAY, 15TH.

2.	N. S. W.	4	bc	...	30.227	59.8	54.5	70	63.5	7	Cir str.	Cum. & Str.	At noon, lat. 33° 10' S., long. 135° 0' W. Temperature by self-registering thermo- meter, max. 60° 5', min. 57° 0'. Current, S. 15° W. 13'. Several albatross and a few Cape pigeons seen.
4.	N <sup>W</sup> by W.	5	bc	...	30.237	59.3	53.5	67	62.5	5	Str.	Cum.	
6.	N <sup>W</sup> by S.	3	bc	...	30.268	58.5	53.5	71	61.5	1	Str.	Cum.	
8.	N <sup>W</sup> by W.	4	bc	...	30.335	58.8	54.0	72	61.5	3	Str.	Cum. & Cum	Sp. gr. 1.02594. Swell from S. W.
10.	N. S.	3	bc	...	30.338	59.0	53.8	70	62.0	5	Cir str.	Cum.	
Noon.	N <sup>W</sup> by E.	4	bc	...	30.337	59.0	53.8	70	62.0	1	Str.	Cum.	
2.	N <sup>W</sup> by E.	3	bc	1	30.317	59.3	54.3	71	63.2	2	Cir.	...	
4.	N. S. E.	2	bc	1	30.314	59.8	54.3	68	63.5	3	Cir.	Cum.	
6.	N. S. E.	1	bc	...	30.341	59.8	53.8	66	63.0	4	Cir.	Cum.	
8.	N <sup>W</sup> by E.	0	bc	...	30.378	58.8	53.8	71	63.5	5	...	Cum. & Str.	
10.	N <sup>W</sup> by S.	1	bc	...	30.381	58.8	53.5	70	63.5	7	...	Cum. & Str.	
Midt.	Calm.	0	bc	...	30.361	58.5	53.5	71	63.2	9	...	Cum. & Str.	
Totals.	...	30	bc	2	3837	109.4	46.3	837	32.9	52	Cir. & Str.	Cum. & Str.	
Mean.	N <sup>W</sup> by E.	2		1	30.320	59.1	53.9	70	62.7	4			

## SATURDAY, 16TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>bs</sup> .	1	bc	...	30.320	57.8	52.8	71	63.0	9	...	Cum.	At noon, lat. 33° 29' s. long. 133° 22' w. Temperature by self-registering thermo- meter, max. 65° 5', min. 56° 0'. Current, N. 57° E. 2'.
4.	Calm.	0	bc	...	30.349	58.3	52.8	68	63.0	9	...	Cum.	
6.	SE <sup>bs</sup> .	1	bc	...	30.363	57.8	53.0	72	62.7	8	Cir.	Cum.	
8.	Calm.	0	bc	...	30.370	59.3	54.3	71	62.7	8	Str.	Cum.	
10.	SE <sup>bs</sup> .	1	c	...	30.384	59.8	55.8	76	63.0	9	...	Cm.&Str.	Numerous albatross. Long westerly swell. Sp. gr. 1.02614.
Noon.	NE <sup>bs</sup> .	0	bc	...	30.371	61.8	56.8	72	63.2	8	Cir.	Cm.&Str.	
2.	S.E.	1	bc	...	30.352	63.8	57.8	67	63.2	8	Cir str.	Cm.&Str.	
4.	S.E.E.	0	bc	...	30.342	63.3	57.5	68	64.0	8	...	C.C.&C.Nb	
6.	Variable.	1	bc	...	30.346	61.3	55.8	70	62.5	8	Cir str.	Cum.	Bright halo round the sun from 1.30 to 2 P.M. Sp. gr. 1.02580.
8.	S.E.E.	0	bc	...	30.404	59.3	56.3	82	62.2	9	Str.	Cum.	
10.	SE <sup>bs</sup> .	1	bc	...	30.365	59.3	55.9	75	62.0	9	Cir str.	Cum.	
Milt.	SE <sup>bs</sup> .	0	c	...	30.386	58.8	54.8	76	61.5	10	...	Cm.&Str.	
Totals.	...	6	bc	...	4352	0.6	62.7	28	33.0	99	Cir str.	Cum. & Str.	
Mean.	SE <sup>bs</sup> .	1		...	30.363	60.9	55.2	72	62.7	8			

## SUNDAY, 17TH.

2.	SE <sup>bs</sup> .	1	c	...	30.369	58.8	53.5	70	59.5	10	...	Cm.&Cumst	At noon, lat. 34° 6' s. long. 131° 39' w. Temperature by self-registering thermo- meter, max. 62° 8', min. 57° 0'. Current, N. 75° E. 4'. Albatross and Cape pigeons seen.
4.	S.S.E.	2	c	...	30.363	58.8	53.3	68	59.5	10	...	Cm.&Cumst	
6.	SE <sup>bs</sup> .	3	c	...	30.409	58.3	52.8	68	59.8	10	...	Cm.&Cumst	
8.	S.S.E.	2	c	...	30.430	58.8	53.8	71	59.7	10	...	Cm.&Cumst	
10.	SE <sup>bs</sup> .	1	c	...	30.427	60.8	55.8	72	60.0	9	Str.	Cum.	Bright halo round the sun from 1.30 to 2 P.M. Sp. gr. 1.02580.
Noon.	S.S.E.	3	bc	...	30.435	60.8	56.3	75	60.0	8	Cir str.	Cm.&Cumst	
2.	S.S.E.	3	bc	...	30.446	61.3	57.3	77	60.0	8	Cir str.	Cum str.	
4.	S.E.	3	bc	...	30.452	60.0	56.3	77	59.5	6	Crem & Str.	Cm.&Str.	
6.	S.E.	3	bc	3	30.466	59.0	55.8	81	59.0	8	Str.	Cum.	Midnight, clouds from SE <sup>bs</sup> .
8.	SE <sup>bs</sup> .	3	bc	...	30.500	57.8	54.8	81	59.0	5	Cir.	Cum.	
10.	SE <sup>bs</sup> .	2	bc	...	30.503	57.8	53.8	76	59.0	3	Str.	...	
Milt.	SE <sup>bs</sup> .	3	bc	...	30.525	57.3	54.0	80	58.8	8	Str.	Cum.	
Totals.	...	29	bc	...	5325	109.5	57.5	896	113.8	95	Cir str.	Cum., Str., & Cum str.	
Mean.	SE <sup>bs</sup> .	2		3	30.444	59.1	54.8	75	59.5	8			

## MONDAY, 18TH.

2.	E.S.E.	3	c	...	30.476	57.8	54.8	81	59.0	10	...	Cm.&Str.	At noon, lat. 36° 0' s. long. 132° 22' w. Temperature by self-registering thermo- meter, max. 60° 5', min. 55° 0'. Current, w. 21'. Albatross, mollymawks, and Cape pigeons seen. Sp. gr. 1.02587.
4.	E.S.E.	2	bc	...	30.468	56.8	54.3	84	59.0	6	...	Cm.&Str.	
6.	SE <sup>bs</sup> .	3	c	...	30.486	56.3	53.3	81	58.5	10	...	Cm.&Str.	
8.	SE <sup>bs</sup> .	4	c	...	30.499	56.8	53.3	78	58.2	10	Str.	Cm.&Str.	
10.	SE <sup>bs</sup> .	3	c	...	30.497	58.3	54.0	75	58.2	10	...	Cm.&Str.	Bright halo round the sun from 1.30 to 2 P.M. Sp. gr. 1.02580.
Noon.	SE <sup>bs</sup> .	3	c	...	30.495	59.3	54.3	71	58.5	10	Str.	Cum.	
2.	SE <sup>bs</sup> .	3	c	...	30.445	59.5	54.5	71	58.8	9	Str.	Cum.	
4.	E.S.E.	1	c	...	30.433	58.8	53.8	71	58.8	9	Str.	Cum.	
6.	E.S.E.	1	bc	...	30.450	57.8	53.3	73	58.2	8	...	Cum.	Midnight, clouds from SE <sup>bs</sup> .
8.	SE <sup>bs</sup> .	1	c	...	30.432	56.8	52.8	75	59.0	10	Str.	Cum str.	
10.	S.E.	0	c	...	30.434	56.8	52.3	73	58.5	10	...	Str.	
Milt.	S.E.	1	c	...	30.402	56.3	52.8	78	58.5	10	...	Str.	
Totals.	...	25	c	...	5517	91.3	43.5	71	103.2	112	Str.	Cum. & Str.	
Mean.	E.S.E.	2		...	30.460	57.6	53.6	76	58.6	9			

TUESDAY, 19TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SE <sup>1</sup> S.	1	c	...	30.286	55.8	51.8	75	58.0	10	Str.	Cum.	At noon, lat. 36° 41' s. long. 132° 55' w. Temperature by self-registering thermo- meter, max. 60°, min. 53° 5. Current, s. 74° w. 14'.
4.	S.E.	1	c	...	30.288	55.0	51.0	75	58.0	10	Str.	Cum.	
6.	SE <sup>1</sup> E.	1	bc	...	30.291	54.8	50.8	75	57.8	5	Cir.	Str.	
8.	SE <sup>1</sup> S.	1	bc	...	30.286	56.3	51.8	73	57.8	7	Cir.	Str.	
10.	SE <sup>1</sup> S.	3	bc	...	30.278	56.0	51.8	74	58.0	7	Cir.	Str.	Albatross, Cape pigeons, mutton birds, and one stormy petrel seen. Sp. gr. 1-02587.
Noon.	S.E.	3	bc	...	30.271	58.8	54.0	72	58.0	5	Cir.	Cum.	
2.	SE <sup>1</sup> E.	3	bc	...	30.278	57.8	52.8	71	58.0	7	Str.	Cum.	
4.	E.S.E.	3	bc	...	30.277	56.8	51.8	70	58.0	8	...	Cm.&Str.	
6.	E.S.E.	3	bc	...	30.275	55.8	51.8	75	57.0	9	...	Cum.	Sp. gr. 1-02587.
8.	E.S.E.	3	bc	...	30.277	55.3	51.3	75	56.7	8	...	Cm.&Str.	
10.	E.S.E.	3	bc	...	30.277	55.0	52.0	81	56.0	7	Str.	Cum.	
Midt.	E.S.E.	3	bc	...	30.291	54.8	52.0	82	56.0	8	Cir str.	Cum.	
Totals.	...	30	bc	...	4575	72.2	22.9	58	81.3	91	Cir. & Str.	Cum. & Str.	
Mean.	SE <sup>1</sup> E.	2		...	30.281	56.0	51.9	75	57.4	8			

WEDNESDAY, 20TH.

2.	E.S.E.	2	bc	...	30.270	53.3	52.3	93	56.0	7	...	Cm.&Cm.st	At noon, lat. 38° 54' s. long. 133° 21' w. Temperature by self-registering thermo- meter, max. 56° 0, min. 51° 5. Current, s. 74° w. 12'.
4.	E.S.E.	4	opd	...	30.257	53.0	51.8	92	56.0	10	...	Cum.	
6.	SE <sup>1</sup> E.	3	c	...	30.294	53.5	50.5	80	56.0	10	...	Cum.	
8.	E.S.E.	4	cq	...	30.401	52.8	49.3	77	56.2	10	...	Cum.	
10.	E <sup>1</sup> S.	3	c	...	30.413	53.3	49.3	74	55.2	10	...	Cum.	Albatross, mollymawks, Cape pigeon, mutton birds, and one prion seen. Swell from s.w.
Noon.	E <sup>1</sup> S.	4	bc	...	30.415	54.8	50.8	75	55.5	8	Str.	Cum.	
2.	E <sup>1</sup> S.	3	bc	...	30.391	54.8	50.8	75	55.5	8	Str.	Cum.	
4.	E <sup>1</sup> S.	3	bc	...	30.372	53.8	50.0	75	55.5	9	Str.	Cum.	
6.	E.	3	bc	...	30.386	52.8	49.3	77	54.2	9	...	Cum.	
8.	E.	2	c	...	30.402	52.3	48.8	77	54.2	10	...	Cum.	
10.	E <sup>1</sup> S.	1	c	...	30.406	51.8	48.3	77	54.5	10	...	Cum.	
Midt.	E <sup>1</sup> S.	2	c	...	30.385	51.8	48.3	77	54.5	10	...	Cum.	
Totals.	...	34	bcqd	...	4701	38.0	119.5	109	63.3	111	Str.	Cum.	
Mean.	E <sup>1</sup> S.	3		...	30.392	53.2	49.9	79	55.3	9			

THURSDAY, 21ST.

2.	F.N.E.	1	bc	...	30.246	51.5	48.0	77	54.5	7	Cir.	Cum.	At noon, lat. 40° 8' s. long. 132° 52' w. Temperature by self-registering thermo- meter, max. 56° 5, min. 50° 5. Current, s. 19° w. 17'.
4.	E.N.E.	2	bc	...	30.236	51.3	48.0	79	54.5	8	Cir.	Cum.	
6.	NE <sup>1</sup> N.	1	c	...	30.260	52.0	48.8	79	54.5	9	...	Cum.	
8.	NE <sup>1</sup> N.	2	c	...	30.251	52.0	48.8	79	54.7	10	Str.	Cum.	
10.	NE <sup>1</sup> W.	1	c	...	30.241	54.0	50.5	77	54.7	10	...	Cum.	Albatross, Cape pigeons, mutton birds, and prion seen. Sp. gr. 1-02557
Noon.	SE <sup>1</sup> E.	0	bc	...	30.211	55.0	50.5	73	54.7	8	Cir.cm.&Str	Cm.&Cm.st	
2.	N.E.	0	c	...	30.205	55.3	51.3	75	54.7	10	...	Cm.&Str.	
4.	NE <sup>1</sup> E.	1	c	...	30.284	54.8	51.3	78	54.7	10	...	Str.	
6.	N.E.	0	c	...	30.257	53.8	51.3	83	54.5	10	...	Str.	
8.	SE <sup>1</sup> E.	1	c	...	30.270	53.8	51.8	86	54.5	10	...	Cm.&Str.	
10.	Calm.	0	cd	...	30.248	52.8	51.8	93	54.5	10	...	Cm.&Str.	
Midt.	SE <sup>1</sup> E.	1	cd	...	30.241	50.3	49.8	97	54.5	10	...	Cm.&Str.	
Totals.	...	10	cd	...	3648	36.6	1.9	16	7.0	112	Cir. & Str.	Cum., & Str., & Cum str.	
Mean.	NE <sup>1</sup> E.	1		...	30.294	53.0	50.2	81	54.6	9			

## FRIDAY, 22d OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and corrected.	Thermometer.		Humidity.	Temperature of sea surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S.S.E.	1	om	...	30.202	51.0	50.8	98	54.0	10	...	Str.&Cum.	At noon, lat. 40° 0' S, long. 131° 36' W. Temperature by self-registering thermometer, max. 54.2, min. 50°. Current, N. 82° E. 21'. Wind very variable both in force and direction. Albatross, Cape pigeons, mutton birds. Sp. gr. 1.02554.
4.	S.E.	12	cp	...	30.169	51.3	50.3	93	54.2	10	...	Str.&Cum.	
6.	S.S.E.	1	c	...	30.186	51.3	49.8	90	54.2	10	...	Str.	
8.	S.E.	12	c	...	30.190	51.3	49.8	90	53.7	10	...	Str.&Cum.	
10.	S.E.	12	be	...	30.189	51.8	49.8	86	53.7	6	Cir str.	Str.&Cum.	
Noon.	E.S.E.	1	be	...	30.163	52.8	50.8	86	54.7	8	...	Str.&Cum.	
2.	E.S.E.	0	be	...	30.119	53.0	50.8	85	55.0	8	Cir cum.	Cum.&Str.	
4.	E.S.E.	1	be	...	30.085	53.3	51.0	84	55.0	7	Cir cum.	Cum.	
6.	Variable.	0	c	...	30.097	53.8	51.3	83	55.0	10	...	Str.	
8.	Variable.	1	c	...	30.082	53.5	51.3	85	54.7	9	...	Cum.&Str.	
10.	S.E.	1	oc	...	30.071	52.8	51.3	89	54.5	10	...	Cum.&Str.	
Midt.	E.S.	0	o	...	30.055	52.8	51.3	90	54.5	10	...	Cum.&Str.	
Totals.	...	12	bcp	...	1608	28.7	8.3	99	53.2	108	Cir cum. & Cir str.	Cum & Str.	
Mean.	S.E.	1		...	30.134	52.4	50.7	88	54.4	9			

## SATURDAY, 23d.

2.	E.S.	1	c	...	29.987	52.8	51.8	93	54.5	10	...	Cum str.	At noon, lat. 39° 46' S, long. 131° 21' W. Temperature by self-registering thermometer, max. 52.5, min. 49.0. Current, N. 7° W. 7'. A few black fish and some Cape pigeons seen. Sp. gr. 1.02527.
4.	S.E.	1	od	...	29.950	51.8	51.5	98	54.2	10	...	Str.	
6.	S.S.E.	1	od	...	29.943	51.8	51.3	97	54.5	10	...	Str.	
8.	S.S.E.	1	od	...	29.922	50.8	50.3	96	55.0	10	...	Str.	
10.	S.S.E.	2	cm	...	29.914	51.0	50.8	98	55.2	10	...	Str.	
Noon.	S.E.	1	cm	...	29.863	50.8	50.5	98	56.0	10	...	Str.	
2.	S.W.	3	op	...	29.826	50.8	49.5	91	54.5	10	...	Cum.&Str.	
4.	S.W.	3	oc	...	29.788	50.8	48.8	86	54.5	10	...	Cum.&Str.	
6.	S.S.W.	4	c	...	29.787	51.8	50.0	87	54.5	10	...	Cum.	
8.	S.S.W.	4	c	...	29.814	51.0	49.3	88	54.0	10	...	Cum.	
10.	S.W.	5	c	...	29.814	51.0	48.0	80	54.0	9	...	Str.	
Midt.	S.W.	5	be	...	29.821	49.8	47.5	81	53.7	6	Cir.	Str.	
Totals.	...	31	cp	...	10429	14.2	119.3	16	54.6	115	Cir.	Cum. & Str.	
Mean.	S.W.	3		...	29.877	51.2	49.9	91	54.5	10			

## SUNDAY, 24th.

2.	S.W.	7	beq	4	29.802	48.8	45.8	79	54.5	8	...	Cum.	At noon, lat. 39° 27' S, long. 127° 28' W. Temperature by self-registering thermometer, max. 50, min. 45°. Current, N. 7° W. 7'.
4.	S.	5	be	5	29.846	47.8	44.8	79	54.0	6	...	Cum.	
6.	S.W.	6	be	...	29.869	47.5	44.8	81	53.7	4	...	Cum.	
8.	S.W.	6	beq	...	29.871	47.3	44.8	83	53.7	6	...	Cum.	
10.	S.W.	5	beq	...	29.889	48.0	44.8	78	54.2	6	...	Cum.	
Noon.	S.S.W.	7	beqp	...	29.921	46.8	44.8	86	53.7	6	...	Cum.	
2.	S.S.W.	5	beq	...	29.899	48.8	45.8	79	55.0	8	...	Cum.	
4.	S.S.W.	6	beq	...	29.901	48.8	45.8	79	54.7	5	...	Cum.	
6.	S.W.	4	beq	3	29.941	47.8	45.8	86	51.5	4	...	Cum. Const	
8.	S.W.	5	be	...	29.968	47.8	45.8	86	...	3	...	Cum.	
10.	S.W.	3	beqp	...	30.000	47.8	44.8	79	54.5	7	...	Cum.	
Midt.	S.W.	5	beq	...	30.009	47.8	44.8	79	54.8	2	...	Cum.	
Totals.	...	64	beqp	12	10916	95.0	62.6	974	47.3	65	...	Cum.	
Mean.	S.W.	5		4	29.909	47.9	45.2	81	54.3	5			

## MONDAY, 25TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	s.w.	4	bcq	...	30.019	47.8	45.8	86	53.2	5	...	Cum.		At noon, lat. 39° 16' s. long. 124° 7' w. Temperature by self-registering thermo- meter, max. 55° 5', min. 43° 5'. Current, N. 11'. Albatross, mollymawks, Cape pigeon, prion, and mutton birds seen. Sp. gr. 1°02532.
4.	s.w.	4	bcq	...	30.023	47.8	45.3	82	53.2	5	...	Cum.		
6.	s.w.	5	bc	...	30.041	47.8	44.8	79	53.0	5	...	Cum.		
8.	s.s.w.	6	bcqp	...	30.092	46.8	44.0	80	52.0	10	...	Cum.		
10.	s.w.	4	bc	...	30.099	49.3	47.0	84	51.7	8	...	Cum.		
Noon.	s.w.	3	bc	...	30.072	52.8	47.8	69	52.5	5	Cir str.	Cum.		
2.	w.b.s.	12	bc	...	30.061	51.8	48.3	77	53.0	4	Cir str.	Cum.		
4.	w.b.s.	3	bc	...	30.053	51.8	47.8	74	53.5	5	Cir str.	Cum.		
6.	w.b.s.	3	bc	4	30.053	51.8	49.0	81	54.0	1	...	Cum.		
8.	w.b.s.	5	bcq	...	30.065	50.8	48.8	86	54.5	...	...	...		
10.	w.	12	bcq	...	30.016	51.3	49.8	90	54.2	5	Str.	Cum.		
Midt.	w.	3	bcq	...	29.980	51.8	50.8	93	54.0	8	Str.	Cum.		
Totals.	...	44	bcqp	...	574	1.6	89.2	981	38.8	61				
Mean.	sw ½ w.	4		4	30.048	50.1	47.4	82	53.2	5	Cir str.	Cum.		

## TUESDAY, 26TH.

2.	w.	4	cpd	...	29.969	51.8	51.8	100	54.0	10	...	Cm.&Str.		At noon, lat. 39° 13' s. long. 121° 0' w. Temperature by self-registering thermo- meter, max. 56° 0', min. 49° 2'. Current, N. 64° E. 7'. Albatross, Cape pigeon, mutton birds, and numerous prion seen. Sp. gr. 1°02532.
4.	w.b.s.	3	cp	...	29.940	52.3	52.3	100	54.0	10	...	Cm.&Str.		
6.	w.b.s.	3	c	...	29.952	53.3	52.8	97	54.0	10	...	Cum.		
8.	w.b.s.	4	cpd	...	29.957	52.8	52.8	100	53.2	10	...	Cm.&Str.		
10.	sw.b.w.	3	c	4	29.954	53.3	52.8	97	54.0	10	...	Cm.&Nb.		
Noon.	sw.b.w.	5	bcqp	...	29.942	54.8	52.8	87	53.8	3	Cir str.	Cum.		
2.	sw.b.w.	12	bc	...	29.960	53.8	52.8	93	53.5	7	Str.	Cum.		
4.	sw.b.w.	3	bc	...	29.874	55.5	53.8	89	53.0	6	...	Cum.		
6.	sw.b.w.	12	bc	...	29.874	53.8	52.3	90	53.0	4	...	Cm.&Str.		
8.	w.b.s.	3	cpd	...	29.858	51.3	50.5	94	53.0	10	...	Cm.&Nb.		
10.	w.s.w.	2	bc	...	29.868	51.8	50.8	93	53.0	8	...	Cum.		
Midt.	w.	3	bc	...	29.850	51.3	49.8	90	52.8	3	...	Cum.		
Totals.	...	37	bcqp	...	10938	35.8	25.3	1130	41.3	91				
Mean.	w.s.w.	3		4	29.911	53.0	52.1	94	53.4	8	Cir str.	Cum., Str., & Nimb.		

## WEDNESDAY, 27TH.

2.	w.	2	bc	...	29.784	51.0	50.3	95	52.8	5	...	Cum.		At noon, lat. 39° 13' s. long. 118° 49' w. Temperature by self-registering thermo- meter, max. 57° 8', min. 49° 2'. Current, E. 11'. Heavy s.w. swell. Usual birds seen, besides a night hawk and a new grey petrel. 6.30 p.m., wind shifted suddenly to s. Sp. gr. 1°02550.
4.	w.	3	bcq	...	29.786	50.3	49.8	97	52.5	4	...	Cum.		
6.	w.	5	bc	...	29.792	51.8	50.8	93	53.0	9	...	Cum.		
8.	w.	6	bcq	...	29.787	54.8	53.0	88	53.0	6	...	Cm.&Cmst		
10.	w.b.s.	3	bc	...	29.791	54.8	52.5	86	53.0	6	Cir.	Cm.&Str.		
Noon.	w.b.s.	4	bc	...	29.787	56.3	54.3	87	53.0	7	Cir.	Cum.		
2.	w.	3	cpd	...	29.759	54.8	53.3	90	53.2	10	...	Cmst & Nb.		
4.	w.	3	bc	...	29.754	53.3	52.3	93	53.5	7	Cir str.	Cm.&Str.		
6.	w.	3	bc	3	29.736	53.8	52.3	90	53.2	6	Cir. & Crem	Cm.&Str.		
8.	s.	3	cp	...	29.777	49.8	49.8	100	53.0	10	...	Cm.&Str.		
10.	s.	2	cp	...	29.779	50.3	48.8	90	53.0	10	...	Str.		
Midt.	s.	3	bc	...	29.780	50.5	48.8	88	53.0	8	...	Str.		
Totals.	...	40	bcqp	...	9312	31.5	16.0	17	36.2	88				
Mean.	w.s.w.	3		3	29.776	52.6	51.3	91	53.0	7	Cir.	Cum., Str., & Nimb.		

## THURSDAY, 28TH OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to sea- level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper	Lower.	
2.	S.S.E.	4	oe	...	29.767	48.8	48.3	97	...	10	...	Cm.&Cmst	At noon, lat. 38° 56' S. long. 116° 8' W. Temperature by self-registering thermo- meter, max. 51°, min. 47°. Current, N. 6'.  Sp. gr. 1.02530.
4.	S.S.E.	3	oe	...	29.771	48.3	46.8	90	53.2	10	...	Cum str.	
6.	SEBS.	4	o	...	29.809	48.5	46.3	85	52.0	10	...	Str.	
8.	SEBS.	3	bc	...	29.840	48.8	46.3	82	52.2	8	...	Cm.&Str.	
10.	SEBS.	4	bc	...	29.848	49.8	46.8	80	53.2	6	Cir str.	Cum.	
Noon.	S.S.E.	4	bc	...	29.843	49.8	47.8	86	53.5	5	Cir.	Cr.cm.&Cm	
2.	S.S.E.	5	bc	...	29.839	49.8	47.8	86	53.5	6	Cir.	Cr.cm.&Cm	
4.	S.S.E.	4	bc	...	29.840	49.5	47.5	86	53.5	6	Cir.	Cum.	
6.	SEBS.	6	bc	...	29.853	49.8	46.8	80	...	8	Cir str.	Cum.	
8.	SEBS.	4	bc	...	29.909	49.5	46.3	77	53.0	7	Str.	Cum.	
10.	SEBS.	5	bcq	...	29.911	48.8	46.0	80	53.0	4	...	Cum.	
Midd.	SEBS.	3	bcq	...	29.914	49.3	46.3	79	53.2	6	...	Cum.	
Totals.	...	49	bcq	...	10135	110.7	83.0	48	30.3	85	Cir. & Cir str.	Cir cum., Cum., & Str.	
Mean.	S.S.E.	4		2	29.845	49.2	46.9	84	53.0	7			

## FRIDAY, 29TH.

2.	SEBS.	5	bcq	...	29.914	48.8	46.3	82	53.0	6	Cir.	Cum.	At noon, lat. 38° 44' S. long. 112° 40' W. Temperature by self-registering thermo- meter, max. 55°, min. 46°. S. Current, N. 13° E. 13'.  Albatross, mollymawks, mutton birds, and Cape pigeons seen. Sp. gr. 1.02546.
4.	SEBS.	4	bcq	...	29.924	48.3	45.8	82	53.0	4	Cir.	Cum.	
6.	SEBS.	5	bc	...	29.971	48.8	46.3	82	53.2	3	...	Cum.	
8.	SEBS.	5	bc	...	29.997	48.8	45.8	79	...	3	...	Cum.	
10.	SEBS.	4	bcq	...	30.024	48.8	45.8	79	53.0	4	Cr.cm.&St.	Cum.	
Noon.	SEBS.	6	bcq	...	30.036	48.5	46.8	87	...	4	...	Cum.	
2.	S.	5	bcq	...	30.051	52.8	48.8	74	53.2	4	Cir str.	Cum.	
4.	S.	4	bc	...	30.059	51.8	48.8	80	53.2	5	Cir str.	Cum.	
6.	S.S.W.	3	bc	...	30.106	52.8	48.8	74	53.0	4	...	Cum.	
8.	S.S.W.	4	bc	...	30.143	50.8	47.3	77	...	6	...	Cum.	
10.	SEBS.	3	bc	...	30.152	49.8	46.8	80	53.0	4	...	Cum.	
Midd.	SEBS.	2	bc	...	30.168	49.8	46.8	80	53.0	4	...	Cum.	
Totals.	...	50	bcq	...	545	119.8	84.1	116	6	51	Cir. & Cir str.	Cum.	
Mean.	SEBS.	4		...	30.045	50.0	47.0	79	53.1	4			

## SATURDAY, 30TH.

2.	SWBS.	1	bc	...	30.170	49.8	46.8	80	54.2	4	...	Cum.	At noon, lat. 38° 43' S. long. 111° 5' W. Temperature by self-registering thermo- meter, max. 55°, min. 47°. S. Current, S. 70° E. 6'.  Albatross, Cape pigeon, and mutton birds seen. Sp. gr. 1.02546.
4.	SWBS.	3	bc	...	30.164	48.8	46.3	82	54.2	5	...	Cum.	
6.	SWBS.	2	bc	...	30.202	49.3	47.3	86	54.0	5	...	Cum.	
8.	WBS.	2	bc	...	30.201	49.8	46.8	80	54.0	5	...	Cum.	
10.	S.W.	2	bc	...	30.232	51.8	48.3	77	53.5	3	Cir str.	Cum.	
Noon.	WBS.	3	bc	1	30.224	52.8	49.3	77	53.7	3	Cir cum.	Cum.	
2.	W.	2	bc	...	30.204	53.5	50.3	79	53.7	4	...	Cum.	
4.	WBS.	3	bcq	...	30.186	52.8	49.8	80	52.7	6	...	Cum.	
6.	WBS.	2	bc	...	30.200	53.8	50.3	77	54.2	6	...	Cum.	
8.	WBS.	2	bc	...	30.182	51.8	49.5	84	54.0	5	...	Cum.	
10.	WBS.	3	bc	...	30.202	51.8	49.8	86	54.5	3	...	Cum.	
Midd.	WBS.	3	bc	...	30.187	52.8	50.3	83	54.0	7	...	Cum.	
Totals.	...	28	bcq	...	2354	18.8	104.8	11	46.7	56	Cir str.	Cum.	
Mean.	WBS.	2		1	30.196	51.6	48.7	81	53.9	5			

## SUNDAY, 31st OCTOBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 10.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swbw.	3	bc	...	30°216	52.3	49.8	83	54.0	2	...	Cm.&Str.	At noon, lat. 38° 50' s. long. 108° 6' w. Temperature by self-registering thermo- meter, max. 59°, min. 51°. Current, e. 5'. Sp. gr. 1.02523.
4.	swbw.	3	bc	...	30°141	52.8	50.8	86	54.0	7	...	Str.	
6.	swbw.	3	e	...	30°158	53.3	51.5	87	54.2	9	...	Cm.&Str.	
8.	swbw.	4	bc	...	30°150	53.8	52.5	91	54.5	8	...	Cm.&Str.	
10.	swbw.	3	bc	...	30°147	56.5	54.5	87	55.2	6	...	Cum.	
Noon.	N. S. W.	3	bc	...	30°131	57.0	55.5	89	55.2	5	...	Cir.	
2.	swbw.	3	bc	...	30°120	57.8	55.3	84	54.8	8	...	Cir str.	
4.	N. S. W.	4	bc	...	30°099	57.8	55.8	87	54.5	4	...	Cir str.	
6.	swbw.	4	bc	...	30°076	57.8	55.8	87	54.5	2	...	Str.	
8.	N. S. W.	4	bc	...	30°073	55.0	53.8	92	51.5	4	...	Str.	
10.	swbw.	4	bc	...	30°068	54.8	53.8	93	53.5	5	...	Cir.	
Midd.	swbw.	5	bcq	...	30°048	53.8	53.0	94	53.5	7	...	Cum.	
Totals.	...	42	bcq	...	1427	62.7	41.9	100	52.4	67	...	Cir str.	Cum. & Str.
Mean.	swbw.	3		...	30°119	55.2	53.5	88	54.4	6	...	...	

## MONDAY, 1st NOVEMBER.

2.	N. S. W.	5	bc	...	30°066	54.3	53.8	97	53.2	7	...	Cum.	At noon, lat. 39° 4' s. long. 105° 5' w. Temperature by self-registering thermo- meter, max. 59° 2', min. 52° 8'. Current, s. 6'. Birds seen were albatross, mollymawks, Cape pigeons, mutton birds, and white breasted petrel. Sp. gr. 1.02524.
4.	Nbw.	5	bc	...	29°997	54.0	53.3	95	53.2	9	...	Cm.&Cm.st	
6.	N. W.	5	bc	...	29°985	55.3	54.8	97	53.8	7	...	Str.	
8.	swbw.	6	bcq	...	29°963	55.8	54.8	93	53.8	9	...	Cm.&Str.	
10.	swbw.	5	bcq	...	29°991	57.8	56.3	90	53.8	8	...	Cm.&Str.	
Noon.	swbw.	4	eq	...	29°983	57.8	56.8	93	53.8	9	...	Cm.&Str.	
2.	swbw.	...	eq	...	29°995	57.8	56.8	93	53.5	10	...	Cm.&Str.	
4.	swbw.	...	eq	...	29°971	57.5	56.5	93	53.5	10	...	Cm.&Str.	
6.	N. S. W.	5	bc	3	29°966	57.3	56.3	93	55.0	7	...	Cm.&Str.	
8.	Nbw.	5	bc	...	29°975	56.8	56.0	95	55.0	5	...	Cir str.	
10.	Nbw.	5	bc	...	29°986	55.8	54.8	93	54.2	6	...	Cir cum.	
Midd.	Nbw.	4	e	...	29°992	56.3	55.3	93	54.2	10	...	Str.	
Totals.	...	49	bcq	...	11810	76.5	65.5	45	47.0	97	...	Cir cum.	Cum. & Str.
Mean.	N. S. W.	5		3	29°984	56.4	55.5	94	53.9	8	...	...	

## TUESDAY, 2d.

2.	N <sup>1</sup> W.	4	cp	...	30°008	55.8	55.5	98	54.0	10	...	Str.	At noon, lat. 39° 19' s. long. 101° 19' w. Temperature by self-registering thermo- meter, max. 60°, min. 53° 5'. Current, s. 29' w. 16'. Long w.s.w. swell. Sp. gr. 1.02522.
4.	N <sup>1</sup> W.	5	e	...	30°000	55.5	54.8	95	54.0	10	...	Str.	
6.	N <sup>1</sup> E.	3	cp	...	30°026	55.0	54.8	99	54.2	10	...	Cm.&Cm.st	
8.	N <sup>1</sup> E <sup>1</sup> E.	6	e	2	30°036	55.8	55.3	97	54.0	10	...	Cum.	
10.	N <sup>1</sup> W.	5	e	...	30°035	57.3	56.0	91	54.0	10	...	Cum.	
Noon.	N <sup>1</sup> W.	5	e	...	30°041	58.3	56.8	90	54.5	10	...	Cum.	
2.	N <sup>1</sup> E.	5	bc	...	30°055	58.8	57.3	90	55.0	8	...	Cm.&Str.	
4.	N <sup>1</sup> E.	4	bc	...	30°076	58.8	56.8	88	54.8	8	...	Cum. & Str.	
6.	N <sup>1</sup> E.	3	bc	...	30°108	57.8	56.8	93	55.0	8	...	Cum. & Str.	
8.	N <sup>1</sup> E <sup>1</sup> E.	4	bc	...	30°154	56.8	56.0	94	55.5	6	...	Cum.	
10.	N <sup>1</sup> E <sup>1</sup> E.	3	e	...	30°164	56.0	55.5	97	55.0	9	...	Cum.	
Midd.	N <sup>1</sup> E <sup>1</sup> E.	4	e	...	30°195	56.3	55.8	97	56.0	10	...	Cum.	
Totals.	...	51	cp	...	898	82.2	71.4	49	56.0	109	...	Cir cum.	Cum. & Str.
Mean.	N <sup>1</sup> E.	4		2	30°075	56.8	55.9	94	54.7	9	...	...	

## WEDNESDAY, 3d NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NbE.E.	3	c	...	30.196	56.8	55.8	93	55.8	10	...	Str.	At noon, lat. 39° 22' s. long. 98° 46' w. Temperature by self-registering thermo- meter, max. 64°, min. 54°. Current, s. 11° w. 10'.
4.	NbE.E.	1	c	...	30.196	55.8	55.8	100	55.8	10	...	Str.	
6.	NbE.E.	1	bc	...	30.225	55.8	55.8	100	55.0	8	Str.	Cir cum.	
8.	NbE.E.	12	bc	...	30.267	58.8	56.3	85	55.0	8	...	Cum.	Very few birds seen, only one albatross and two or three Cape pigeons and mutton birds. Sp. gr. 1.02513.
10.	NNW.W.	1	bc	...	30.293	59.3	56.5	84	55.5	3	Cir str.	Cum.	
Noon.	WNW.N.	1	bc	...	30.309	62.0	60.8	93	58.0	12	Cir str.	Cum.	
2.	NbE.E.	0	bc	...	30.291	62.3	61.8	97	60.5	12	Cir.	Cum.	A few mutton birds seen.
4.	NbE.E.	1	bc	...	30.304	61.5	57.3	76	57.0	9	...	Cum.	
6.	NbE.E.	0	bc	...	30.322	58.5	54.5	76	56.5	12	Cir.	Cum.	
8.	NbE.E.	1	bc	...	30.336	55.8	54.5	92	56.0	7	...	Cum.	Upper clouds from E.N.E. A few mutton birds seen. Sp. gr. 1.02530.
10.	E.N.N.	1	c	...	30.357	57.8	54.3	79	56.5	10	...	Cm.&Cumst	
Midt.	E.N.N.	2	oc	...	30.355	55.8	54.3	90	56.5	10	...	Cm.&Str.	
Totals.	...	15	bc	...	3451	100.2	77.7	1065	78.1	76	Cir. & Cir str.	Cum. & Str.	
Mean.	Variable.	1		...	30.288	58.4	56.5	89	56.5	6			

## THURSDAY, 4TH.

2.	E.N.	2	opd	...	30.340	54.5	53.0	89	56.5	10	...	Cum.	At noon, lat. 38° 37' s. long. 96° 27' w. Temperature by self-registering thermo- meter, max. 62° 5', min. 53° 0'. Current, s. 75° E. 8'.
4.	E.N.	3	opbn	...	30.340	53.8	53.3	96	56.5	10	...	Cum.	
6.	E.N.	3	odm	...	30.358	54.3	53.8	97	56.5	10	...	Str.	
8.	E.N.	12	opdp	...	30.380	55.8	55.3	97	56.0	10	...	Cm.&Str.	Upper clouds from E.N.E. A few mutton birds seen. Sp. gr. 1.02530.
10.	NbE.E.	2	bc	...	30.377	56.8	56.8	100	56.0	9	...	Cm.&Str.	
Noon.	E.N.N.	2	bc	...	30.377	60.8	58.8	88	56.0	8	...	Cum.	
2.	E.N.N.	12	bc	...	30.384	61.8	58.8	82	59.0	7	Cir str.	Cum.	A few mutton birds seen. Sp. gr. 1.02530.
4.	E.N.N.	1	bc	...	30.386	61.8	58.8	82	59.0	5	Cir str.	Cum.&Str.	
6.	NbE.E.	1	bc	1	30.382	60.8	58.8	88	58.5	8	...	Str.&Cm.	
8.	NbE.E.	0	bc	...	30.387	59.8	57.8	88	58.5	8	...	Str.&Cm.	Upper clouds from E.N.E. A few mutton birds seen. Sp. gr. 1.02530.
10.	NbE.E.	1	bc	...	30.421	58.8	57.5	92	58.0	7	...	Cum.	
Midt.	Calm.	0	bc	...	30.403	58.8	57.5	92	57.7	8	...	Cum.	
Totals.	...	19	opdm & bc	...	4535	97.8	80.2	1091	88.2	100	Cir str.	Cum. & Str.	
Mean.	E.N.	2		1	30.378	58.1	56.7	91	57.3	8			

## FRIDAY, 5TH.

2.	Calm.	0	bcm	...	30.385	58.3	56.3	87	58.0	10	...	Cm.&Str.	At noon, lat. 38° 7' s. long. 94° 4' w. Temperature by self-registering thermo- meter, max. 62° 5', min. 54° 5'. Current, s. 79° E. 15'.
4.	Calm.	0	bc	...	30.373	57.5	55.8	88	58.0	5	...	Cm.&Str.	
6.	E.N.	1	bc	...	30.388	59.0	57.5	91	58.0	6	...	Cm.&Str.	
8.	E.N.	1	bc	...	30.400	58.8	56.3	85	58.0	7	Cir str.	Cm.&Nl.	Birds seen were albatross, Cape pigeons, mollymawks, and mutton birds.
10.	E.N.	2	bc	...	30.394	58.8	56.3	85	58.0	8	Str.	Cm.&Nl.	
Noon.	E.N.N.	1	bc	...	30.389	60.8	57.0	78	58.8	5	...	Cm.&Str.	
2.	E.N.N.	1	bc	...	30.371	61.3	57.0	76	58.5	5	Cir str.	Cm.&Str.	Upper clouds from E.N.E. A few mutton birds seen. Sp. gr. 1.02530.
4.	E.N.N.	1	bc	...	30.371	59.8	55.8	76	59.0	4	Cir.	...	
6.	E.N.	1	bc	...	30.380	60.0	55.8	75	58.7	9	...	Cum.	
8.	NbE.E.	0	bc	...	30.383	57.8	54.8	81	58.5	7	Cir cum.	Cum.	Upper clouds from E.N.E. A few mutton birds seen. Sp. gr. 1.02530.
10.	E.N.	1	bc	...	30.384	57.3	54.8	84	58.5	4	Cir cum.	Str.	
Midt.	E.N.	0	bc	...	30.378	56.8	54.8	87	58.5	8	...	Cm.&Str.	
Totals.	...	9	bc	...	4596	106.2	72.2	993	45	78	Cir., Str. & Cir cum.	Cum., Str. & Nimb.	
Mean.	E.	1		...	30.383	58.8	56.0	83	58.4	6			

## SATURDAY, 6TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometre, duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>1</sup> /S.	0	bc	...	30.358	57.3	59.8	73	58.0	9	...	Cm.&Nb.	At noon, lat. 37° 50' s. long. 93° 54' w. Temperature by self-registering thermo- meter, max. 61°, min. 55°.8. Current, N. 18° E. 11°.
4.	NE <sup>1</sup> /E.	1	...	...	30.350	56.8	54.8	87	58.0	...	...	Cum.	
6.	Calm.	0	bc	...	30.381	56.8	54.8	87	58.2	10	...	Cum.&Cm.	
8.	E <sup>1</sup> /S.	1	bc	...	30.399	57.3	54.3	81	58.0	9	...	Cir str.	Birds seen were albatross, Cape pigeons, and mutton birds. Sp. gr. 1°02527.
10.	E <sup>1</sup> /S.	1	bc	...	30.393	59.8	55.8	76	58.5	8	...	Cum.	
Noon.	E <sup>1</sup> /S.	1	bc	...	30.385	59.3	55.3	76	59.3	4	...	Cum.	
2.	E <sup>1</sup> /S.	1	bc	...	30.378	59.8	55.8	76	60.7	5	...	Cir str.	Birds seen were albatross, Cape pigeons, and mutton birds. Sp. gr. 1°02527.
4.	E <sup>1</sup> /S.	0	bc	...	30.377	59.3	55.8	74	61.2	6	...	Cir.	
6.	E <sup>1</sup> /S.	1	bc	...	30.363	59.0	54.8	75	60.0	7	...	Cir.	
8.	E <sup>1</sup> /S.	0	bc	...	30.402	58.0	54.0	75	58.5	...	...	Str.	Birds seen were albatross, Cape pigeons, and mutton birds. Sp. gr. 1°02527.
10.	Calm.	0	bc	...	30.403	57.8	54.0	77	59.0	...	...	Cum.	
Midd.	Calm.	0	bc	...	30.374	57.5	53.8	77	59.7	1	...	Cum.	
Totals.	...	6	...	...	4593	100.0	57.0	99	109.5	68	Cir. & Cir str.	Cum.	
Mean.	E <sup>1</sup> /S.	1	...	...	30.383	58.3	54.8	78	59.1	6	...	...	

## SUNDAY, 7TH.

2.	Calm.	0	bc	...	30.355	56.8	53.8	81	59.5	1	...	Cum.	At noon, lat. 37° 25' s. long. 93° 36' w. Temperature by self-registering thermo- meter, max. 65°, min. 55°.5. Current, N. 8° E. 17°.
4.	Calm.	0	bc	...	30.342	56.8	54.0	82	59.2	2	...	Str.	
6.	NE <sup>1</sup> /E.	1	bc	...	30.357	57.3	54.3	81	59.0	3	...	Str.	
8.	E <sup>1</sup> /S.	0	bc	...	30.405	59.8	55.8	76	58.7	3	...	Cir str.	Birds seen were albatross, mutton birds, and one stormy petrel. Sp. gr. 1°02534.
10.	NE <sup>1</sup> /E.	1	bc	...	30.375	62.3	57.3	72	60.0	3	...	Cir.	
Noon.	N <sup>1</sup> /E.	2	bc	...	30.353	62.8	57.3	69	60.0	3	...	Cir.	
2.	N <sup>1</sup> /E.	1	bc	...	30.318	64.5	53.5	72	60.7	4	...	Cir cum.	Swell from s.w. High red dawn.
4.	N <sup>1</sup> /E.	2	bc	...	30.310	63.5	58.5	72	60.7	5	...	Cum.	
6.	N <sup>1</sup> /E.	2	bc	...	30.319	62.8	57.8	72	60.7	2	...	Cir str.	
8.	N <sup>1</sup> /E.	3	bc	...	30.219	59.8	54.0	77	59.2	2	...	Cir.	Swell from s.w. High red dawn.
10.	NE <sup>1</sup> /E.	3	bc	...	30.337	59.3	55.8	79	60.0	2	...	Cir str.	
Midd.	N <sup>1</sup> /E.	3	bc	...	30.313	58.8	55.8	82	60.0	3	...	Cir.	
Totals.	...	18	...	...	4193	4.5	75.9	915	117.7	33	Cir str.	Cum. & Str.	
Mean.	N <sup>1</sup> /E.	1	bc	...	30.342	60.4	56.3	76	59.8	3	...	...	

## MONDAY, 8TH.

2.	N <sup>1</sup> /E.	2	beqpd	...	30.250	58.8	55.8	82	60.0	9	...	Cm.&Nb.	At noon, lat. 37° 56' s. long. 90° 36' w. Temperature by self-registering thermo- meter, max. 62°, min. 56°.2.
4.	N <sup>1</sup> /E.	4	bc	...	30.230	57.8	54.8	81	59.5	2	...	Cm.&Str.	
6.	N <sup>1</sup> /E.	4	bc	...	30.251	57.8	53.8	76	58.5	4	...	Cm.&Str.	
8.	N <sup>1</sup> /E.	4	bc	...	30.248	59.5	56.5	82	58.5	6	...	Cir.	Current, S. 13° W. 17°.
10.	N <sup>1</sup> /E.	3	bc	...	30.247	60.5	55.8	72	58.5	9	...	Cum.	
Noon.	N <sup>1</sup> /E.	3	bc	...	30.237	60.8	55.5	71	58.7	10	...	Cum.	
2.	N <sup>1</sup> /E.	3	bc	...	30.231	61.2	55.3	67	59.2	8	...	Cm.&Str.	Swell from s. Sp. gr. 1°02534.
4.	N <sup>1</sup> /E.	5	beq	...	30.213	59.8	54.8	71	59.2	7	...	Cm.&Cm.	
6.	N <sup>1</sup> /E.	4	bc	...	30.195	59.0	54.8	75	58.8	10	...	Str.&Cm.	
8.	N. N. E.	5	eq	...	30.193	57.3	54.8	84	58.8	10	...	Str.&Cm.	Swell from s. Sp. gr. 1°02534.
10.	N. N. E.	3	eq	...	30.190	56.0	53.5	84	58.7	10	...	Str.&Cm.	
Midd.	N. N. E.	5	eq	...	30.157	55.8	53.5	85	58.7	10	...	Str.&Cm.	
Totals.	...	46	beqpd	...	2651	104.4	58.9	90	107.1	95	Cir.	Cum. Str. & Nimbo.	
Mean.	N <sup>1</sup> /E.	4	...	...	30.221	58.7	54.9	77	58.9	8	...	...	

TUESDAY, 9TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface, 0 to 16.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE½E.	5	bc	...	30.167	55.8	54.8	93	59.0	6	...	Cum.	At noon, lat. 38° 6' s. long. 88° 2' w. Temperature by self-registering thermo- meter, max. 62°, min. 54° 5. Current, s. 30° w. 17'. High red dawn. Birds seen were stormy petrel, prion, and mutton birds. Sp. gr. 1.02535.
4.	NNE½E.	6	cq	...	30.140	56.3	53.8	84	59.0	10	...	Cm.&Cmst.	
6.	N½E.	5	cqp	...	30.146	57.8	55.5	85	59.2	9	...	Cir.	
8.	N½E.	6	bc	...	30.151	57.8	54.8	81	59.5	7	...	Cir str.	
10.	N½E.	5	bc	...	30.139	60.3	56.3	76	59.8	8	...	Cir str.	
Noon.	N½E.	5	bc	...	30.118	60.8	55.8	72	59.8	8	...	Cm.&Cmst.	
2.	N½E.	5	bc	...	30.102	60.8	56.8	77	59.2	5	...	Cir.	
4.	N½E.	3	bc	...	30.082	60.8	56.5	76	59.2	5	...	Cir.	
6.	Nb½E.	5	c	1	30.055	58.8	55.8	82	59.0	9	...	Cir str.	
8.	Nb½E.	4	bc	...	30.066	57.8	55.0	82	58.0	8	...	Cm.&Str.	
10.	Nb½E.	3	c	...	30.106	57.8	55.3	84	57.5	10	...	Cm.&Str.	
Midt.	Nb½E.	4	c	...	30.120	57.8	54.8	81	57.0	10	...	Cm.&Str.	
Totals.	...	56	bcqp	...	1452	102.6	65.2	13	106.2	95	Cir. & Cir str.	Cum., Str., & Cum str	
Mean.	Nb½E.	5		1	30.121	58.6	55.4	81	58.8	8			

## WEDNESDAY, 10TH.

2.	N½E.	3	bc	...	30.112	57.8	57.0	94	57.0	8	...	Cum.	At noon, lat. 38° 19' s. long. 84° 39' w. Temperature by self-registering thermo- meter, max. 61° 5, min. 55° 5. Current, s. 17'. Birds seen, stormy petrel and Cape pigeons. Sp. gr. 1.02529.
4.	N½E.	4	bc	...	30.103	57.5	54.8	83	57.0	7	...	Cum.	
6.	NNE½E.	4	c	...	30.144	56.8	54.0	82	57.0	10	...	Cum.	
8.	NNE½E.	3	c	...	30.168	56.5	53.3	79	56.5	10	...	Cm.&Str.	
10.	NNE½E.	4	c	...	30.184	57.8	53.8	76	56.5	10	...	Cm.&Str.	
Noon.	NNE½E.	3	bc	...	30.192	59.3	54.0	70	56.2	6	Cir cum.	Cm.&Str.	
2.	Nb½E.	2	bc	...	30.194	60.3	54.3	66	56.5	6	Cm.&Cmst.	Cm.&Str.	
4.	Nb½E.	1	bc	...	30.173	60.3	54.3	66	57.0	6	Cm.&Cmst.	Str.	
6.	NE½N.	1	bc	...	30.187	58.8	53.8	71	57.7	4	Cm.&Cmst.	Cm.&Str.	
8.	NE½N.	3	bc	...	30.184	56.3	52.8	78	57.7	3	Cm.&Cmst.	Cum.	
10.	NE½N.	0	c	...	30.194	55.8	50.5	68	56.7	9	...	Cm.&Str.	
Midt.	NE½E.	1	c	...	30.184	55.8	50.8	70	56.2	10	...	Cm.&Str.	
Totals.	...	29	bc	...	2019	93.0	43.4	903	82.0	89	Cir cum. & Str.	Cum. & Str.	
Mean.	NNE½E.	2		...	30.168	57.7	53.6	75	56.8	7			

## THURSDAY, 11TH.

2.	NE½N.	0	c	...	30.151	54.8	50.3	73	56.2	10	...	Cm.&Str.	At noon, lat 37° 29' s. long. 83° 7' w. Temperature by self-registering thermo- meter, max. 60° 8, min. 52° 5. Current, s. 39° w. 3'. Birds seen, a few prion and albatross, numerous stormy petrel and Cape pigeons. Sp. gr. 1.02543.
4.	NE½N.	1	c	...	30.146	54.8	49.8	70	56.5	10	...	Cm.&Str.	
6.	NE½N.	0	c	...	30.143	53.3	49.3	74	56.5	10	...	Cm.&Str.	
8.	Nb½E.	1	c	...	30.176	54.8	50.3	70	56.7	10	...	Cm str.	
10.	NE½N.	0	c	...	30.152	56.3	51.8	73	57.0	10	...	Cm.&Cmst.	
Noon.	Nb½E.	2	c	...	30.155	57.3	52.3	70	57.0	10	...	Cm.&Cmst.	
2.	NE½N.	0	c	...	30.114	59.3	53.8	68	57.8	9	Cir str.	Cm.&Cmst.	
4.	NE½N.	1	c	...	30.098	57.5	52.5	70	57.8	10	Cir str.	Cm.&Cmst.	
6.	NE½N.	0	c	...	30.073	56.8	52.3	73	57.5	10	Str.	Cm.&Cmst.	
8.	NE½N.	1	c	...	30.060	55.8	51.5	73	57.2	...	...	Cm.&Cmst.	
10.	Nb½E.	1	c	...	30.092	55.8	50.8	70	58.0	10	...	Cum.	
Midt.	Calu.	0	c	...	30.061	54.8	50.5	74	58.2	10	...	Cm.&Str.	
Totals.	...	7	c	...	1421	71.3	15.2	18	86.4	109	Cir str.	Cum., Str., & Cum str.	
Mean.	NE½N.	1		...	30.118	55.9	51.3	71	57.2	10			

## FRIDAY, 12TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 10.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Caln.	0	bc	...	30.022	54.8	50.3	73	57.0	8	St. & Cr. cm.	Cm. & Cum. st.	At noon, lat. 35° 52' s. long. 81° 25' w. Temperature by self-registering thermo- meter, max. 62° 5, min. 53° 0.
4.	Caln.	0	c	...	30.013	54.3	49.8	72	56.5	9	...	St. & Cum. st.	
6.	sw ½ w.	1	c	...	30.024	54.0	49.8	73	56.5	10	...	Str.	
8.	Caln.	0	c	...	30.025	55.5	50.8	71	57.0	10	...	Str. & Cum.	
10.	NE ½ E.	1	c	...	30.022	59.8	53.8	66	57.7	9	...	Str. & Cum.	Current, w. 5.
Noon.	NE ½ S.	1	bc	...	30.025	59.5	53.5	66	59.5	7	...	Cum.	Slight s.e. swell.
2.	Caln.	0	bc	...	30.016	61.3	54.8	65	60.0	8	Cir. str.	Cum.	Sp. gr. 1.02540.
4.	SE ½ E.	1	c	...	29.984	59.8	54.3	68	59.5	10	...	Cm. & Cum. st.	Upper clouds from w.
6.	SE ½ w.	1	bc	...	29.975	58.3	53.3	71	59.0	9	...	Cum.	
8.	SE ½ w.	1	bc	...	29.967	56.8	52.8	75	58.5	5	...	Cm. & Str.	
10.	SE ½ w.	1	bc	...	29.980	57.0	52.8	74	57.2	5	Str.	Cm. & Str.	
Midd.	SE ½ w.	2	bc	...	29.951	57.5	53.8	77	58.2	5	...	Cum.	
Totals.	...	9	bc	...	502	88.6	29.8	11	96.6	95	Str.	Cum., Str., & Cum. str.	
Mean.	s.	1		...	30.000	57.4	52.5	71	58.0	8			

## SATURDAY, 13TH

2.	SE ½ w.	2	bc	...	29.935	57.3	54.3	81	58.0	8	Cir. cum.	Cum.	At noon, lat. 34° 9' s. long. 79° 25' w. Temperature by self-registering thermo- meter, max. 62° 8, min. 55° 8. Current, s. 14° w. 7.
4.	SE ½ w.	2	c	...	29.966	57.3	54.5	83	58.0	10	...	Cm. & Cum. st.	
6.	SE ½ w.	1	bc	...	29.922	58.3	54.8	79	58.0	7	Cr. cm. & St.	Cm. & Str.	
8.	SE ½ E.	2	bc	...	29.933	58.8	56.8	88	58.5	8	Cir. str.	Cm. & Str.	
10.	SE ½ E.	1	bc	...	29.927	59.8	56.8	82	58.5	6	Cir. str.	Cm. & Str.	6.10 p.m., anchored in Cumberland bay, Juan Fernandez island.
Noon.	SE ½ w.	3	bc	...	29.936	61.3	58.8	85	58.5	5	Cir. cum.	Cum.	
2.	SE ½ w.	3	bc	...	29.917	62.0	59.5	85	58.0	7	...	Cm. & Str.	
4.	SE ½ w.	5	bc	...	29.956	61.8	58.5	81	58.0	5	...	Cm. & Str.	
6.	SE ½ w.	4	c	...	29.957	60.0	57.8	87	...	10	...	Cm. & Cum. st.	
8.	Variable.	1	bc	...	29.979	60.8	57.8	82	...	8	...	Cm. & Str.	
10.	SE ½ w.	1	bc	...	29.978	61.3	57.8	80	...	6	...	Cum.	
Midd.	SE ½ w.	1	bc	...	29.989	59.8	58.8	94	...	8	...	Cm. & N.b.	
Totals.	...	26	bc	...	11355	118.5	86.2	47	15	88	Cir. str. & Cum.	Cum., Str., & Cum. str.	
Mean.	SE ½ w.	2		...	29.945	59.9	57.2	84	58.2	7			

## SUNDAY, 14TH.

2.	Variable.	1	c	...	29.963	59.8	57.8	85	...	9	...	Str.	At Juan Fernandez island. Temperature by self-registering thermo- meter, max. 65°, min. 57°.
4.	Caln.	0	c	...	29.963	59.5	57.3	87	...	8	...	Str.	
6.	Caln.	0	c	...	29.933	59.8	57.8	85	57.8	8	...	Cm. & Cum. st.	
8.	Variable.	3	bc	...	29.966	60.3	58.3	88	...	8	...	Cm. & Str.	
10.	Variable.	0	bc	...	30.004	60.8	60.8	100	...	7	Cir. str.	Cum.	
Noon.	Variable.	3	bc	...	30.011	64.3	61.0	81	...	8	Cir. str.	Cum.	
2.	SE ½ E.	1	bc	...	30.022	62.3	59.8	85	...	6	...	Cum.	
4.	SE ½ E.	3	bc	...	30.013	61.3	58.8	85	...	5	...	Cum.	
6.	SE ½ E.	1	bc	...	29.990	61.5	59.5	89	59.0	7	...	Cum.	
8.	SE ½ E.	1	bc	...	30.005	60.8	59.3	91	...	8	...	Cum.	
10.	Caln.	0	bc	...	30.012	61.3	59.8	91	...	8	...	Cum.	
Midd.	Caln.	0	bc	...	30.006	60.3	59.3	94	...	8	...	Cum.	
Totals.	...	13	bc	...	11968	12.0	109.8	107	16.8	90	Cum. str.	Cum. & Str.	
Mean.	SE ½ E.	1		...	29.997	61.0	59.1	89	58.4	8			

## MONDAY, 15TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity, sat. = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.985	59.8	58.8	94	...	...	8	...	Cum.	At Juan Fernandez. Temperature by self-registering thermometer, max. 64°, min. 58°.
4.	Calm.	0	bc	...	29.976	60.3	59.3	94	...	...	8	...	Cum.&Str.	
6.	Variable.	1	e	...	29.972	60.3	58.8	91	58.7	9	...	...	Str.	
8.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	1	e	...	29.984	61.3	59.8	91	...	...	10	...	Cum.&Str.	
10.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> N.	1	e	...	29.976	62.8	60.8	88	...	...	9	...	Cum.	
Noon.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> N.	0	e	...	29.982	62.8	60.8	88	...	...	10	...	Cum.&Cumst.	
2.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.942	62.8	60.8	88	...	...	7	Cir str.	Cum.	
4.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.914	61.8	60.8	94	...	...	7	Cir str.	Cum.	
6.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.904	61.3	59.3	88	59.0	7	...	Cir str.	Cum.	
8.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	3	e	...	29.914	60.8	59.3	91	...	...	10	...	Cum.	
10.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> E.	3	oe	...	29.927	59.8	58.8	94	59.0	10	...	...	Cum.&Str.	6.30 p.m., left Cumberland bay, Juan Fernandez island.
Midt.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> N.	3	bc	...	29.909	59.5	58.8	95	59.0	5	...	...	Cum.&Str.	
Totals.	...	17	bc	...	1138.5	13.3	116.1	16	35.7	100	...	Cir str.	Cum., Str., & Cum. str.	
Mean.	N <sup>b</sup> E <sup>1</sup> / <sub>2</sub> N.	1		...	29.949	61.1	59.7	91	58.9	8	...	...	...	

## TUESDAY, 16TH.

2.	NNE½E.	3	bc	...	29.873	59.8	58.5	93	59.2	7	Cum.&Str.	Cum.&Str.	At noon, lat. 33° 54' s. long. 76° 22' w. Temperature by self-registering thermometer, max. 63° 5, min. 58° 0. Current, s. 43° w. 11'.  Sea smooth and of a pale green colour. Sp. gr. 1.02528.
4.	NNE½E.	3	e	...	29.853	59.3	58.0	92	59.2	9	Str.	Cum.&Str.	
6.	NNE½E.	3	e	...	29.866	59.3	58.0	92	59.0	10	...	Str.	
8.	NNE½E.	4	bc	...	29.880	59.5	58.0	91	58.7	9	...	Cum.	
10.	NNE½E.	3	bc	...	29.888	60.0	58.5	91	58.7	8	...	Cum.	
Noon.	NNE½E.	3	e	...	29.886	62.0	59.3	84	58.7	9	Cir cum.	Cum.	
2.	N½E.	4	e	...	29.890	61.3	58.8	85	59.0	9	Str.	Cum.&Str.	
4.	NNE½E.	3	oe	...	29.887	60.8	58.8	88	59.0	10	Cir str.	Cum.&Cumst.	
6.	NNE½E.	4	e	...	29.893	59.8	58.3	91	58.5	10	...	Str.&Cum.	
8.	NNE½E.	4	e	...	29.916	58.8	57.8	94	58.5	10	...	Str.&Cum.	
10.	NN½E.	3	e	...	29.895	58.0	56.8	92	58.0	9	...	Str.&Cum.	
Midt.	NNE½E.	3	bc	...	29.892	57.8	56.8	93	57.7	8	...	Str.&Cum.	
Totals.	...	41	e	...	1061.9	116.4	97.6	6	104.2	108	Cir cum. & Str.	Cum. & Str.	
Mean.	N.N.E.	3		...	29.885	59.7	58.1	90	58.7	9			...

## WEDNESDAY, 17TH.

2.	N.N.E.	3	e	...	29.879	57.8	56.8	93	57.2	10	...	Cum.&Str.	At noon, lat. 34° 7' s. long. 73° 56' w. Temperature by self-registering thermo- meter, max. 63°, min. 56° 8. Current, s. 16°, E. 15°.
4.	NNE½E.	2	e	...	29.875	57.8	56.5	92	59.0	10	...	Cum.&Str.	
6.	NNE½E.	2	e	...	29.901	58.8	57.0	89	58.8	10	...	Cum.&Str.	
8.	N½E.	3	e	...	29.888	58.3	56.8	91	58.8	10	...	Str.	
10.	N½E.	2	e	...	29.909	60.3	58.5	89	58.8	10	...	Cum.&Str.	
Noon.	N½E.	3	e	...	29.890	61.8	59.3	85	59.0	10	...	Cum.&Str.	
2.	N½E.	2	e	...	29.892	61.5	59.0	85	59.0	9	...	Cum.&Str.	
4.	N½E.	5	e	...	29.871	59.8	58.3	91	58.7	10	...	Cum.&Str.	
6.	N½E.	5	e	1	29.880	59.5	57.8	89	58.0	10	...	Str.	
8.	N½E.	6	eq	...	29.887	58.8	57.5	93	58.0	10	...	Cum.&Str.	
10.	N½E.	6	e	...	29.912	58.8	57.8	94	58.5	10	...	Cum.&Str.	
Midt.	N½E.	5	e	...	29.890	58.3	57.8	97	58.5	9	...	Cum.&Str.	
Totals.	...	41	eq	...	1067.4	111.5	93.1	8	102.3	118	...	Cum. & Str.	
Mean.	NNE½E.	4		1	29.889	59.3	57.8	91	58.5	10	...	...	

## THURSDAY, 18TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>by</sup> E.	3	cp	...	29.885	57.8	57.8	100	58.5	10	...	Cum str.	At noon, lat. 34° 9' S. long. 72° 32' W. Temperature by self-registering thermo- meter, max. 60.2°, min. 56.2°. Current, S. 19° E. 18'.
4.	N <sup>by</sup> E.	3	cr	...	29.879	57.8	57.8	100	58.5	10	...	Str.	
6.	N <sup>by</sup> W.	4	com	...	29.904	57.8	57.8	100	58.5	10	...	Cum.	
8.	N <sup>by</sup> W.	4	or	...	29.928	57.5	57.3	98	58.5	10	...	Cum.	
10.	N <sup>by</sup> W.	5	com	...	29.970	57.8	57.3	97	57.5	10	...	Str.	
Noon.	N <sup>by</sup> E.	3	bc	...	29.993	58.8	58.8	100	57.8	6	Cir cum.	Cum. & Str.	
2.	N <sup>by</sup> E.	2	c	...	30.020	58.8	58.3	97	57.8	10	...	Cum. & Str.	
4.	N <sup>by</sup> E.	3	c	...	30.005	59.8	58.8	94	56.5	19	...	Cum. & Str.	
6.	N <sup>by</sup> E.	2	c	...	30.008	58.8	58.3	97	58.0	10	...	Str.	
8.	N <sup>by</sup> E.	3	oc	...	30.014	58.8	58.3	97	58.0	10	...	Cum. & Str.	
10.	N <sup>by</sup> E.	2	c	...	29.990	58.8	58.3	97	58.5	10	...	Str.	Sp. gr. 1.02552.
Midd.	N <sup>by</sup> E.	3	c	...	29.952	58.8	58.5	98	58.5	10	...	Str.	
Totals.	...	37	cpm	...	11548	101.3	97.3	95	96.6	116	Cir cum.	Cum., Str., & Cum str.	
Mean.	N <sup>by</sup> E.	3		...	29.962	58.4	58.1	98	58.1	10			

## FRIDAY, 19TH.

2.	N <sup>by</sup> W.	3	cu	...	29.924	58.8	58.3	97	58.5	10	...	Str.	At Valparaiso. Temperature by self-registering thermo- meter, max. 65.5°, min. 57.5°.
4.	N <sup>by</sup> W.	1	cpm	...	29.922	59.3	58.8	97	58.7	10	...	Str. & Cum.	
6.	N <sup>by</sup> W.	4	cu	...	29.936	59.0	58.3	96	58.7	9	...	Str.	
8.	N <sup>by</sup> W.	3	c	...	29.940	58.8	58.3	97	59.0	10	...	Str. & Cum.	
10.	N <sup>by</sup> W.	4	bc	...	29.948	62.3	60.8	91	...	8	...	Cum.	
Noon.	N <sup>by</sup> W.	3	bc	...	29.959	63.3	60.8	85	...	6	...	Cum.	
2.	N <sup>by</sup> W.	2	bc	...	29.953	64.8	61.8	83	...	6	...	Str.	
4.	N <sup>by</sup> W.	1	bc	...	29.967	62.8	60.3	85	...	7	Cir str.	Cir cum.	
6.	N <sup>by</sup> W.	2	cr	...	29.976	59.8	59.3	97	59.0	10	...	Cum.	
8.	N <sup>by</sup> W.	3	c	...	30.021	59.8	58.8	94	...	10	...	Str.	
10.	N <sup>by</sup> W.	1	bc	...	30.052	58.8	57.8	94	...	6	...	Cum.	10.30 A.M., anchored in Valparaiso bay.
Midd.	N <sup>by</sup> W.	2	bc	...	30.054	58.0	57.0	93	...	3	...	Cum.	
Totals.	...	29	bcpm	...	11652	575	110.3	29	43.9	95	Cir str.	Cum. & Str.	
Mean.	N <sup>by</sup> W.	2		...	29.971	60.5	59.2	92	58.8	8			

## SATURDAY, 20TH.

2.	N <sup>by</sup> E.	2	bc	...	30.070	57.0	55.0	87	...	4	...	Str.	At Valparaiso. Temperature by self-registering thermo- meter, max. 74.5°, min. 56.7°.
4.	N <sup>by</sup> E.	1	bc	...	30.070	57.3	55.3	87	...	3	...	Str.	
6.	Calm.	0	bc	...	30.086	59.3	56.8	85	58.7	9	...	Cum. & Cum	
8.	N <sup>by</sup> W.	1	bc	...	30.122	61.8	58.8	82	...	6	Cir.	Cum.	
10.	N <sup>by</sup> W.	1	bc	...	30.114	67.8	61.8	68	...	3	...	Cum.	
Noon.	N <sup>by</sup> W.	2	bc	...	30.103	66.8	60.8	68	...	2	...	Cum.	
2.	N <sup>by</sup> W.	3	bc	...	30.078	68.5	61.0	62	...	2	...	Cum.	
4.	N <sup>by</sup> W.	2	bc	...	30.060	72.8	62.8	54	...	1	...	Cum.	
6.	N <sup>by</sup> W.	3	bc	...	30.077	71.8	63.0	58	59.5	1	...	Cum.	
8.	Calm.	0	b	...	30.086	63.8	58.3	69	...	0	...	...	
10.	Calm.	0	b	...	30.079	60.8	57.8	82	...	0	...	...	
Midd.	Calm.	0	b	...	30.062	59.8	56.3	79	...	0	...	...	
Totals.	...	15	bc	...	1007	47.5	107.7	881	18.2	31	Cir.	Cum. & Str.	
Mean.	Variable.	1		...	30.084	63.9	59.0	73	59.1	3			

## SUNDAY, 21st NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometric Pressure, and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	bm	...	30.027	58.5	55.8	83	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 78°5, min. 55°4.
4.	Calm.	0	bm	...	30.011	56.8	54.8	87	...	0	...	...	
6.	NE <sup>by</sup> E.	1	bm	...	30.028	57.8	56.0	88	59.2	0	...	...	
8.	NNW <sup>by</sup> W.	1	b	...	30.029	60.8	58.3	85	...	0	...	...	
10.	NE <sup>by</sup> E.	1	b	...	30.018	67.8	62.3	71	...	0	...	...	
Noon.	SW <sup>by</sup> W.	2	bm	...	29.978	68.3	64.3	78	...	0	...	...	
2.	SW <sup>by</sup> W.	2	b	...	29.954	76.8	65.3	52	...	0	...	...	
4.	SW <sup>by</sup> W.	4	lc	...	29.935	74.3	62.8	50	...	2	...	Cum.	
6.	Calm.	0	b	...	29.957	71.3	62.5	58	59.2	0	...	...	
8.	Calm.	0	b	...	29.976	64.8	59.8	73	...	0	...	...	
10.	Calm.	0	bm	...	30.006	61.8	57.8	77	...	0	...	...	
Midt.	Calm.	0	bm	...	29.990	60.3	57.3	82	...	0	...	...	
Totals.	...	11	...	...	11909	59.3	117.0	884	...	...	...	...	
Mean.	Variable.	1	bm	...	29.992	64.9	59.7	74	59.2	0	...	Cum.	

## MONDAY, 22d.

2.	Calm.	0	bc	...	29.979	58.8	56.8	88	...	2	...	Cum.	At Valparaiso. Temperature by self-registering thermo- meter, max. 76°5, min. 58°0.
4.	Calm.	0	bm	...	29.969	58.8	56.8	88	...	0	...	...	
6.	Calm.	0	cm	...	29.983	59.5	57.8	89	58.2	10	...	Str.	
8.	NNW <sup>by</sup> W.	1	cm	...	30.006	59.8	57.8	88	...	10	...	Str.	
10.	NW <sup>by</sup> W.	3	bcm	...	30.002	64.3	60.0	76	...	8	...	Str.	
Noon.	W <sup>by</sup> N.	4	bcm	...	29.977	66.3	61.3	73	...	4	...	Str.	
2.	E <sup>by</sup> S.	2	bc	...	29.953	69.8	63.8	69	...	2	...	Cum.	
4.	E <sup>by</sup> S.	1	bc	...	29.922	70.8	64.8	69	...	2	Str.	Cum.	
6.	Calm.	0	bc	...	29.935	69.3	63.3	68	60.0	3	Cir cum.	...	
8.	Calm.	0	b	...	29.965	63.0	59.8	81	...	0	...	...	
10.	NE <sup>by</sup> E.	1	b	...	29.998	61.0	58.3	83	...	0	...	...	
Midt.	NE <sup>by</sup> E.	1	b	...	29.983	59.8	57.8	88	...	0	...	...	
Totals.	...	13	...	...	11672	761.2	118.3	960	...	41	Cir cum. & Str.	Cum. & Str.	
Mean.	Variable.	1	bcm	...	29.973	63.4	59.9	80	59.1	3	...	...	

## TUESDAY, 23d.

2.	NE <sup>by</sup> E.	1	c	...	29.983	59.8	57.8	88	...	10	...	Cum.	At Valparaiso. Temperature by self-registering thermo- meter, max. 70°, min. 58°5.
4.	NE <sup>by</sup> E.	1	c	...	29.985	59.8	57.3	85	...	10	...	Cum.	
6.	NE <sup>by</sup> E.	1	cm	...	30.049	59.8	57.3	85	59.2	10	...	Cum.	
8.	NW <sup>by</sup> N.	1	c	...	30.097	60.8	58.0	83	...	10	...	Cum.	
10.	NNW <sup>by</sup> W.	1	c	...	30.126	64.0	59.8	76	...	10	...	Str.	
Noon.	SW <sup>by</sup> W.	1	o	...	30.151	68.8	61.8	64	...	10	...	Str.	
2.	NW <sup>by</sup> N.	1	c	...	30.129	67.5	60.8	65	...	9	...	Str.	
4.	W <sup>by</sup> S.	1	o	...	30.119	66.5	59.8	65	...	9	...	Str.	
6.	WN <sup>by</sup> N.	1	oc	...	30.057	63.8	58.8	72	60.0	9	...	Cm. & Str.	
8.	SW <sup>by</sup> W.	1	bc	...	30.037	62.3	57.8	75	...	7	...	Str.	
10.	Calm.	0	bc	...	30.053	61.8	58.5	81	...	7	...	Str.	
Midt.	SE <sup>by</sup> E.	1	bc	...	30.022	61.3	56.8	75	...	6	...	Str.	
Totals.	...	11	c	...	808	36.2	104.5	914	...	107	...	Cum. & Str.	
Mean.	Variable.	1	...	...	30.067	63.0	58.7	76	59.6	9	...	...	

## WEDNESDAY, 24TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to Sea-Level.	Thermometer.			Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	SSE	1	bc	...	29.991	61.8	57.8	77	...	9	...	Str.		At Valparaiso. Temperature by self-registering thermometer, max. 71°5 min. 64°5.
4.	Calm.	0	bc	...	29.991	61.8	57.8	77	...	8	...	Str.		
6.	NE	1	bcm	...	30.013	61.8	59.3	85	59.2	5	...	Cum.		
8.	NE	1	c	...	30.064	61.8	59.8	88	...	10	...	Cum.		
10.	WN	1	bc	...	30.084	64.8	60.8	78	...	9	...	Str.		
Noon.	WN	1	bc	...	30.083	69.3	62.3	64	...	8	...	Cum.		
2.	WN	2	bc	...	30.052	71.5	63.3	60	...	2	...	Cum.		
4.	SW	1	bc	...	30.055	68.0	61.3	65	...	2	...	Cum.		
6.	SW	3	bc	...	30.034	65.5	59.8	69	60.0	4	...	Cum.		
8.	SW	1	bc	...	30.026	63.0	58.8	76	...	8	...	Cum.		
10.	SW	1	c	...	30.041	61.8	58.3	80	...	10	...	Str.		
Midt.	SW	2	c	...	30.014	59.8	57.8	88	...	10	...	Cum.		
Totals.	...	16	bc	...	448	50.9	117.1	907	...	88	...	Cum. & Str.		
Mean.	Variable.	1	...	...	30.037	64.2	59.8	76	59.6	7	...	Cum. & Str.		

## THURSDAY, 25TH.

2.	SW	1	c	...	29.958	60.0	57.0	82	...	10	...	Cum.		At Valparaiso. Temperature by self-registering thermometer, max. 70°, min. 58°.
4.	SW	1	c	...	29.953	59.5	56.5	82	...	10	...	Cum.		
6.	SW	1	c	...	29.990	59.8	56.8	82	59.0	10	...	Cum.		
8.	SW	1	c	...	30.009	59.8	57.3	85	...	10	...	Cum.		
10.	WN	1	c	...	30.034	61.3	58.8	85	...	10	...	Cum.		
Noon.	SW	1	bc	...	30.072	62.8	59.3	80	...	9	...	Cm. & Str.		
2.	SW	2	bc	...	30.065	59.8	59.3	97	...	7	Str.	Cum.		
4.	SW	2	bc	...	30.028	60.3	60.3	100	...	8	Str.	Cum.		
6.	SW	1	c	...	29.996	62.8	58.8	77	58.0	10	...	Cum.		
8.	Calm.	0	c	...	29.982	62.3	58.0	77	...	10	...	Cum.		
10.	SW	2	bc	...	29.976	59.8	56.3	79	...	8	...	Cum.		
Midt.	SW	1	c	...	29.964	59.3	55.8	79	...	10	...	Cum.		
Totals.	...	14	bc	...	927	7.5	94.2	1005	...	112	...	Str.	Cum. & Str.	
Mean.	s.w.	1	...	...	30.002	60.6	57.8	84	58.5	9	...	Str.	Cum. & Str.	

## FRIDAY 26TH.

2.	SW	1	c	...	29.937	60.8	57.3	80	...	10	...	Cum.		At Valparaiso. Temperature by self-registering thermometer, max. 76°5, min. 59°.
4.	SW	1	bc	...	29.933	59.8	57.3	85	...	9	...	Cm. & Str.		
6.	SW	1	bc	...	29.965	60.3	57.8	85	57.2	8	...	Cm. & Str.		
8.	SW	1	bc	...	29.982	64.0	59.8	76	...	8	...	Cm. & Str.		
10.	SW	1	bc	...	30.003	69.0	63.3	70	...	7	...	Cm. & Str.		
Noon.	SW	1	bc	...	29.995	72.8	65.0	63	...	8	...	Cum.		
2.	SW	1	bc	...	29.962	73.3	65.3	62	...	4	Cir str.	Cum.		
4.	SW	2	bc	...	29.937	73.8	65.3	60	...	5	Cir str.	Cum.		
6.	Variable.	1	bc	...	29.914	71.8	60.8	51	59.0	4	Cir str.	...		
8.	SW	1	bc	...	29.917	66.0	59.3	65	...	2	...	Str.		
10.	SE	1	b	...	29.913	63.8	57.3	65	...	0	...	...		
Midt.	SW	1	b	...	29.996	61.8	56.8	72	...	0	...	...		
Totals.	...	13	bc	...	11394	77.2	5.3	834	...	65	...	Cir str.	Cum. & Str.	
Mean.	Variable.	1	...	...	29.949	66.4	60.4	69	58.1	5	...	Cir str.	Cum. & Str.	

## SATURDAY, 27TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Caln.	0	b	...	29.937	60.3	55.8	74	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 70°. min. 57°.
4.	Caln.	0	be	...	29.926	57.8	54.8	81	...	2	...	Cum.	
6.	Caln.	0	be	...	29.963	59.8	56.8	82	58.0	6	Cir str.	Cum.	
8.	Caln.	0	be	...	29.926	65.8	60.8	73	...	7	Cir str.	...	
10.	Caln.	0	be	...	30.002	68.8	62.0	65	...	7	Cir str.	Str.	
Noon.	sw by w	1	be	...	30.016	65.8	60.8	73	...	8	Cir str.	Str.	
2.	ws by S.	3	be	...	30.013	65.8	60.8	73	...	8	Cir str.	Str.	
4.	ws by S.	1	c	...	30.009	65.0	59.8	72	...	9	Cir str.	Str.	
6.	sw by w.	1	be	...	30.005	64.3	59.8	75	58.5	8	Cir str.	Cum.	
8.	Caln.	0	be	...	30.006	61.8	58.8	82	...	7	...	Cin.&Str.	
10.	Caln.	0	b	...	30.012	60.5	58.3	87	...	0	...	...	
Midt.	Caln.	0	be	...	30.008	59.0	56.8	87	...	2	...	Str.	
Totals.	...	6	be	...	11893	34.7	105.3	924	...	64	Cir str.	Cum. & Str.	
Mean.	w.	1		...	29.991	62.9	58.8	77	58.2	5			

## SUNDAY, 28TH.

2.	Caln.	0	b	...	30.034	57.8	55.8	87	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 67°, min. 56° 8'.
4.	Caln.	0	be	...	30.034	57.8	55.8	87	...	8	...	Cin.&Str.	
6.	Caln.	0	be	...	30.066	59.0	55.8	81	58.0	7	Cir cum.	Cum.	
8.	Caln.	0	be	...	30.092	60.8	58.8	88	...	8	...	Cin.&Str.	
10.	Caln.	0	be	...	30.109	64.8	61.3	89	...	5	Cir.	Cum.	
Noon.	ws by N.	1	be	...	30.108	64.3	59.3	72	...	8	...	Cum.	
2.	sw by w.	3	c	...	30.137	63.0	58.3	73	...	8	...	Cin.&Str.	
4.	sw by w.	1	c	...	30.119	63.8	57.5	66	...	9	...	Cin.&Str.	
6.	sw by w.	1	be	...	30.117	64.5	57.8	64	58.7	7	Str.	Cum.	
8.	Caln.	0	b	...	30.079	63.3	57.8	69	...	0	...	...	
10.	sw by w.	1	b	...	30.079	60.8	56.8	77	...	0	...	...	
Midt.	sw by w.	1	b	...	30.076	60.3	55.3	71	...	0	...	...	
Totals.		...	8	be	...	1050	20.2	90.3	915	...	60	Cir. & Str.	Cum. & Str.
Mean. Variable.		1	...		30.087	61.7	57.5	76	58.3	5			

## MONDAY, 29TH.

2.	Caln.	0	b	...	30.064	60.0	55.8	75	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 73° 5', min. 57° 5'.
4.	sw by S.	1	be	...	30.049	59.8	55.8	76	...	2	...	Cum.	
6.	sw by S.	2	be	...	30.102	60.8	59.0	89	58.5	3	...	Cum.	
8.	sw by S.	1	be	...	30.103	65.3	60.8	75	...	2	...	Cum.	
10.	sw by w.	3	be	...	30.101	68.3	60.8	62	...	2	...	Cum.	
Noon.	sw by w.	2	be	...	30.081	69.8	61.8	61	...	2	...	Cum.	
2.	sw by S.	2	be	...	30.064	70.8	61.0	54	...	3	Cir.	Cum.	
4.	sw by S.	3	be	...	30.061	70.3	66.3	53	...	4	Cir.	Cum.	
6.	sw by S.	4	be	...	30.050	66.3	57.5	57	55.2	4	Cir cum.	Cum.	
8.	sw by S.	2	be	...	30.060	60.8	54.8	67	...	3	Cir.	Cum.	
10.	Caln.	0	b	...	30.081	59.3	53.8	68	...	0	...	...	
Midt.	Caln.	0	b	...	30.076	58.8	53.8	71	...	0	...	...	
Totals.	...	20	be	...	892	770.3	95.2	808	13.7	25	Cir. & Cir cum.	Cum.	
Mean.	Variable.	2		...	30.074	64.2	57.9	67	56.8	2			

## TUESDAY, 30TH NOVEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and vacu- ated.	Thermometer.		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.086	56.8	52.8	75	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 77°, min. 54° 8'.
4.	Calm.	0	b	...	30.087	55.8	52.3	78	...	0	...	...	
6.	N $\frac{1}{2}$ W.	1	b	...	30.092	57.8	54.0	77	56.0	0	...	...	
8.	NW $\frac{1}{2}$ W.	1	b	...	30.062	66.8	59.8	64	...	0	...	...	
10.	SW $\frac{1}{2}$ W.	2	b	...	30.052	70.0	59.8	53	...	0	...	...	
Noon.	SW $\frac{1}{2}$ W.	4	bc	...	30.038	74.8	60.3	41	...	2	Cir str.	...	
2.	SW $\frac{1}{2}$ W.	3	b	...	30.035	74.8	60.8	43	...	0	...	...	
4.	SW $\frac{1}{2}$ W.	6	b	...	30.007	79.3	59.8	44	...	0	...	...	
6.	SW $\frac{1}{2}$ W.	5	bc	...	29.978	69.0	57.8	49	54.2	2	Cir.	...	
8.	SW $\frac{1}{2}$ W.	5	b	...	29.995	68.8	57.8	50	...	0	...	...	
10.	SE $\frac{1}{2}$ E.	1	b	...	29.994	66.8	56.0	50	...	0	...	...	
Midt.	N $\frac{1}{2}$ E.	1	b	...	29.991	60.8	55.8	72	...	0	...	...	
Totals.	...	29		...	417	75.5	87.0	696	10.2	4			
			b								Cir str.	...	
Mean. Variable.	2			...	30.035	66.3	57.2	58	55.1	0			

## WEDNESDAY, 1ST DECEMBER.

2.	Calm.	0	b	...	29.985	57.8	53.8	75	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 77° 5', min. 55° 5'.
4.	Calm.	0	b	...	29.976	56.8	52.8	75	...	0	...	...	
6.	NW $\frac{1}{2}$ W.	1	bc	...	29.984	56.8	54.0	82	54.0	3	...	Str.	
8.	Calm.	0	b	...	30.012	63.3	58.8	75	...	0	...	...	
10.	Calm.	0	b	...	30.033	65.8	60.3	70	...	0	...	...	
Noon.	Calm.	0	b	...	30.004	67.8	60.8	64	...	0	...	...	
2.	W $\frac{1}{2}$ N.	1	bm	...	29.989	74.8	62.8	49	...	0	...	...	
4.	SW $\frac{1}{2}$ W.	1	bm	...	29.968	74.8	60.8	43	...	0	...	...	
6.	SW $\frac{1}{2}$ W.	1	bm	...	29.967	74.8	60.8	43	55.2	0	...	...	
8.	Calm.	0	b	...	29.980	65.3	58.8	66	...	0	...	...	
10.	Calm.	0	b	...	30.024	61.5	57.5	77	...	0	...	...	
Midt.	Calm.	0	b	...	30.019	59.5	56.3	81	...	0	...	...	
Totals.	...	4		...	11941	59.0	97.5	801	9.2	3			
			bm								...	Str.	
Mean. Variable.	0			...	29.995	64.9	58.1	67	54.6	0			

## THURSDAY, 2nd.

2.	Calm.	0	b	...	30.016	57.8	54.8	81	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 71°, min. 56° 5'.
4.	Calm.	0	bc	...	30.018	57.5	54.8	82	...	5	...	Cum.	
6.	Calm.	0	c	...	30.070	58.8	56.3	85	55.0	10	...	Cum.	
8.	Calm.	0	c	...	30.099	60.8	57.8	82	...	10	...	Cum. & Str.	
10.	Calm.	0	bc	...	30.111	64.8	60.8	78	...	7	...	Cum. & Str.	
Noon.	NW $\frac{1}{2}$ W.	1	bc	...	30.107	66.8	60.8	68	...	3	...	Str.	
2.	W $\frac{1}{2}$ N.	1	b	...	30.076	68.8	62.3	66	...	0	...	...	
4.	SE $\frac{1}{2}$ E.	2	b	...	30.035	67.8	62.3	70	...	0	...	...	
6.	W $\frac{1}{2}$ N.	1	bc	...	29.957	67.8	58.8	56	57.0	1	...	Cum.	
8.	Calm.	0	bc	...	29.955	63.8	57.8	67	...	1	...	Cum.	
10.	SE $\frac{1}{2}$ E.	1	b	...	29.982	61.3	57.8	80	...	0	...	...	
Midt.	Calm.	0	b	...	29.987	58.8	56.8	88	...	0	...	...	
Totals.	...	6		...	413	75.48	101.1	993	...	37			
			bc								...	Cum. & Str.	
Mean. Variable.	1			...	30.034	62.9	58.4	75	56.0	3			

## FRIDAY, 3D DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	cm	...	29.992	57.5	55.3	86	...	10	...	Cum.	At Valparaiso. Temperature by self-registering thermo- meter, max. 74°, min. 55°.
4.	Calm.	0	cm	...	29.986	56.8	55.3	90	...	10	...	Cum.	
6.	Calm.	0	cmf	...	30.008	56.0	54.8	92	56.0	9	...	Cum.	
8.	Calm.	0	cmf	...	30.048	57.3	55.8	90	...	10	...	Cum.	
10.	Calm.	0	cm	...	30.042	58.3	56.8	90	...	10	...	Cum.	
Noon.	Calm.	0	bcm	...	30.058	59.8	57.8	88	...	6	...	Cum.	
2.	N.E. by E.	1	bc	...	30.029	63.3	59.3	77	...	4	Cir.	Cum.	
4.	Calm.	0	bc	...	30.000	69.8	60.8	57	...	3	Cir.	Cum.	
6.	Calm.	0	bc	...	29.985	70.3	62.8	63	58.5	4	Cir.	Cir cum.	
8.	Calm.	0	bc	...	29.983	64.8	56.8	59	...	3	Cir str.	...	
10.	Calm.	0	bc	...	30.004	61.0	55.8	71	...	12	Cir.	...	
Midt.	Calm.	0	bc	...	29.983	58.8	55.8	82	...	3	...	Cum.	
Totals.	...	...	...	...	118	733.7	87.1	945	14.5	74	Cir.	Cum.	
Mean.	Calm.	0	bcm	...	30.010	61.1	57.3	79	57.2	6	Cir.	Cum.	

## SATURDAY, 4TH.

2.	Calm.	0	bc	...	29.967	58.8	55.8	82	...	4	...	Str.	At Valparaiso. Temperature by self-registering thermo- meter, max. 75°, min. 56°.
4.	N.E. by E.	1	bc	...	29.960	57.8	54.8	81	...	3	...	Str.	
6.	Calm.	0	bc	...	29.997	59.0	55.8	81	56.7	1	Cir.	...	
8.	Calm.	0	bc	...	30.043	67.8	61.8	68	...	3	Cir str.	...	
10.	N.E.	1	bc	...	30.037	67.8	61.8	68	...	7	Cir str.	...	
Noon.	N.W. by S.	2	bc	...	30.001	69.8	61.3	59	...	8	Cir cum.	...	
2.	N.E. by E.	2	bc	...	29.950	70.8	63.0	62	...	7	Cir str.	...	
4.	Calm.	0	bc	...	29.931	66.8	60.8	68	...	7	Cir str.	...	
6.	N.E. by E.	1	bc	...	29.962	67.8	61.8	68	58.5	6	Cir str. & Cum.	...	
8.	Calm.	0	bc	...	29.981	62.8	58.8	77	...	4	Cir.	Cum.	
10.	Calm.	0	b	...	29.969	60.8	57.8	82	...	0	...	...	
Midt.	Calm.	0	bl	...	29.969	60.3	56.8	79	...	0	...	...	
Totals.	...	7	...	...	117.67	50.3	110.3	875	15.2	50	Cir str. & Cum.	Str.	
Mean.	N. N. E.	1	bc	...	29.981	64.2	59.2	73	57.6	4	Cir cum.	Str.	

## SUNDAY, 5TH.

2.	Calm.	0	b	...	29.959	58.3	55.8	84	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 81° 5', min. 76° 5'.
4.	Calm.	0	bcm	...	29.940	57.3	55.3	87	...	4	...	Cum.	
6.	Calm.	0	cf	...	29.959	57.8	55.8	87	58.0	8	...	Cum.	
8.	Calm.	0	cf	...	29.977	57.8	56.3	90	...	10	...	Cum.	
10.	Calm.	0	cm	...	29.981	61.8	58.8	82	...	10	...	Cum.	
Noon.	Sw by W.	1	bc	...	29.964	64.8	59.8	73	...	3	...	Cir cum.	
2.	Sw by S.	1	bc	...	29.938	67.8	62.3	70	...	2	...	Cum.	
4.	Sw by W.	2	bc	...	29.939	72.8	62.3	53	...	1	...	Cum.	
6.	Sw by W.	1	bc	...	29.943	74.3	62.8	50	60.0	2	...	Cum.	
8.	SSE by E.	1	b	...	29.971	64.8	58.8	68	...	0	...	...	
10.	Calm.	0	b	...	30.015	60.8	57.8	82	...	0	...	...	
Midt.	Calm.	0	b	...	29.996	59.8	57.0	83	...	0	...	...	
Totals.	...	6	...	...	115.82	38.1	102.8	909	...	40	...	Cum.	
Mean.	Variable.	1	bcm	...	29.965	63.2	58.6	76	59.0	3	...	Cum.	

## MONDAY, 6TH DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometric Pressure and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	29.976	59.5	56.8	84	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 77°, min. 57°.
4.	Calm.	0	b	...	29.959	58.3	55.8	84	...	0	...	...	
6.	Calm.	0	bm	...	29.963	61.3	57.8	80	57.2	0	...	...	
8.	SE by E.	1	b	...	29.975	62.8	59.8	82	...	0	...	...	
10.	SE by E.	1	bc	...	29.956	68.8	64.3	75	...	2	...	Cum.	
Noon.	sw by w.	3	bc	...	29.943	73.3	63.3	54	...	3	...	Cum.	
2.	sw by s.	4	bc	...	29.949	72.8	63.0	55	...	2	...	Cum.	
4.	sw by s.	3	bc	...	29.959	74.8	63.8	52	...	2	...	Cum.	
6.	E by S.	1	bc	...	29.964	71.8	62.8	57	58.2	1	...	Cum.	
8.	SE by E.	1	b	...	30.035	65.8	58.8	64	...	0	...	...	
10.	E by S.	1	b	...	30.049	62.8	57.8	72	...	0	...	...	
Midt.	Calm.	0	b	...	30.026	60.8	56.8	77	...	0	...	...	
Totals.	...	15	...	...	11754	72.8	60.8	836	15.4	10	...	Cum.	
Mean.	Variable.	1	hem	...	29.979	66.1	60.1	69	57.7	1	...	Cum.	

## TUESDAY, 7TH.

2.	Calm.	0	b	...	29.995	60.0	56.0	76	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 79° 5', min. 57° 7'.
4.	Calm.	0	b	...	29.976	59.5	55.5	76	...	0	...	...	
6.	sw by w.	1	b	...	30.002	60.8	56.8	77	56.5	0	...	...	
8.	Calm.	0	b	...	30.008	69.3	61.3	60	...	0	...	...	
10.	sw by w.	1	b	...	29.998	71.8	61.8	54	...	0	...	...	
Noon.	sw by w.	4	bc	...	29.987	72.8	63.8	58	...	2	...	Cum.	
2.	sw by w.	2	b	...	29.969	77.3	64.3	47	...	0	...	...	
4.	sw by w.	3	bc	...	29.966	75.0	62.8	48	...	2	...	Cum.	
6.	sw by w.	1	b	...	29.982	72.0	61.8	53	57.0	0	...	...	
8.	Calm.	0	b	...	...	66.8	58.8	60	...	0	...	...	
10.	Calm.	0	b	...	30.001	62.3	57.8	75	...	0	...	...	
Midt.	Calm.	0	b	...	29.993	60.8	56.8	77	...	0	...	...	
Totals.	...	12	b	...	10877	88.4	117.5	761	...	4	...	Cum.	
Mean.	Variable.	1	...	...	29.989	67.4	59.8	63	56.7	0	...	Cum.	

## WEDNESDAY, 8TH.

2.	Calm.	0	b	...	29.970	59.3	56.8	85	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 74° 5', min. 56° 5'.
4.	Calm.	0	b	...	29.961	58.8	55.8	82	...	0	...	...	
6.	Calm.	0	b	...	29.956	58.5	55.5	81	56.5	0	...	...	
8.	SE by E.	1	b	...	29.992	61.8	58.8	82	...	0	...	...	
10.	W by S.	2	b	...	29.992	69.8	62.3	63	...	0	...	...	
Noon.	sw by w.	4	b	...	29.984	71.3	61.8	55	...	0	...	...	
2.	sw by w.	4	bc	...	30.013	71.3	61.3	53	...	2	...	Cum.	
4.	sw by w.	3	bc	...	30.013	69.8	59.3	52	...	2	...	Cum.	
6.	sw by w.	3	bc	...	30.018	69.8	59.8	53	55.2	2	Cir.	...	
8.	sw by w.	2	bm	...	30.016	64.3	55.8	57	...	0	...	...	
10.	SE by E.	1	b	...	30.030	61.0	55.0	67	...	0	...	...	
Midt.	Calm.	0	b	...	30.022	59.8	54.8	71	...	0	...	...	
Totals.	...	20	...	...	11967	55.5	97.0	801	11.7	6	...	Cum.	
Mean.	Variable.	2	hem	...	29.997	64.6	58.1	67	55.8	1	...	Cum.	

## THURSDAY, 9TH DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea. 0 to 9	Barometer- reduced to sea-level and Sea-level	Thermometer.		Humidity. Sat. 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	Calm.	0	b	...	30.006	59.3	54.8	74	...	0	...	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 75°, min. 55° 5.
4.	Calm.	0	b	...	29.986	57.3	53.8	78	...	0	...	...	
6.	Calm.	0	b	...	29.999	56.8	53.8	81	56.5	3	...	Cir cum.	
8.	Calm.	0	bc	...	30.022	62.3	60.8	91	...	1	Cir str.	...	
10.	Calm.	0	bc	...	30.021	69.0	62.5	66	...	12	Cir str.	...	
Noon.	N.W.	1	b	...	30.043	70.8	63.8	65	...	7	Cir str.	Str.	
2.	N.E. ½ E.	1	bc	...	30.031	69.8	63.8	69	...	6	Str.	Cir cum.	
4.	Calm.	0	bc	...	30.001	67.3	62.8	75	...	8	Str.	Cir cum.	
6.	N.E. ½ E.	1	bc	...	29.998	63.8	60.8	82	57.0	8	Cir str.	...	
8.	Calm.	0	c	...	29.985	62.8	60.3	85	...	9	Str.	Cum.	
10.	Calm.	0	c	...	29.966	62.8	59.5	81	...	9	...	Cum. & Str.	
Midt.	N.E. ½ E.	1	c	...	29.920	61.8	59.0	83	...	9	...	Cum. & Str.	
Totals.	...	...	...	...	1197.8	43.8	115.7	930	...	62	Cir str.	Cir cum., Cum., & Str.	
Mean.	Variable.	1	bc	...	29.998	63.6	59.6	77	56.8	5			

## FRIDAY, 10TH.

2.	N.E. ½ E.	1	bcq	...	29.858	60.8	57.8	82	...	8	Str.	Cum.	At Valparaiso. Temperature by self-registering thermo- meter, min. 59°.
4.	N.E. ½ E.	5	bcq	...	29.821	61.3	58.3	82	...	9	Str.	Cum.	
6.	N.W. ½ W.	5	od	...	29.834	60.8	57.8	82	...	10	...	Str.	
8.	N.W.	5	cr	...	29.872	59.3	58.8	97	...	10	...	Cum.	
10.	N.W. ½ W.	4	orm	...	29.934	58.8	58.3	97	...	10	...	Cum.	
Noon.	N.E. ½ E.	2	orm	...	29.953	58.8	57.8	94	...	10	...	Cum.	
2.	N.E.	1	oclm	...	29.958	59.0	58.3	96	...	10	...	Cum.	
4.	N.E. ½ E.	2	oclm	...	29.975	57.0	56.0	93	...	10	...	Cum.	
6.	N.E. ½ E.	3	opr	...	30.020	55.3	54.8	97	...	10	...	Cum. & Str.	
8.	Calm.	0	od	...	30.063	55.0	54.5	97	...	9	...	Str.	
10.	S.S.W. ½ E.	3	crp	...	30.121	55.3	53.3	87	...	10	...	Cum.	
Midt.	Calm.	0	bep	...	30.157	54.8	52.8	87	...	7	Cir.	Cum. & Str.	
Totals.	...	31	...	...	11566	96.2	78.5	1091	...	113	Cir. & Str.	Cum. & Str.	
Mean.	Variable.	3	cqrlm	...	29.964	58.0	56.5	91	...	9			

## SATURDAY, 11TH.

2.	Calm.	0	bc	...	30.179	53.5	52.3	92	...	3	Cir str.	...	At Valparaiso. Temperature by self-registering thermo- meter, max. 65° 8', min. 51° 0.
4.	Calm.	1	bc	...	30.210	52.8	51.5	91	...	1	Cir str.	...	
6.	S.W. ½ W.	2	bu	...	30.240	53.8	51.8	86	58.5	0	...	...	
8.	Calm.	0	b	...	30.234	59.0	55.8	81	58.7	0	...	...	
10.	S.W. ½ S.	1	bc	...	30.229	59.5	53.8	67	58.7	1	...	Cum.	
Noon.	S.W. ½ S.	5	bc	...	30.214	61.3	55.3	67	59.7	1	...	Cum.	
2.	S.W. ½ S.	5	bc	...	30.187	62.8	56.3	65	59.7	3	...	Cir cum.	
4.	S.S.W. ½ W.	5	bc	...	30.185	61.8	56.3	70	61.0	2	...	Cum.	
6.	S.W. ½ W.	5	b	3	30.151	60.8	55.3	69	61.2	0	...	...	
8.	S.W. ½ W.	6	b	3	30.124	59.8	55.3	74	61.5	0	...	...	1 P.M., left Valparaiso. Sp. gr. 1.02547.
10.	S.S.W. ½ W.	6	b	3	30.108	58.8	54.8	76	61.5	0	...	...	
Midt.	S.S.W. ½ W.	5	b	...	30.081	58.8	54.8	76	61.5	0	...	...	
Totals.	...	44	...	9	2142	702.7	53.3	914	2.0	11	Cir str.	Cum.	
Mean.	S.S.W. ½ W.	4	bcu	3	30.178	58.6	54.4	76	60.2	1			

## SUNDAY, 12th DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometric and for 24 and Sea Level.	Thermometer.		Humidity, Sat. Tot.	Temperature of Sea Surface, 0 to 10.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	ssw w.	5	b	5	30.044	57.8	54.8	81	61.5	0	...	...	At noon, lat. 32° 32' s., long. 74° 17' w. Temperature by self-registering thermo- meter, max. 64° 8', min. 57° 0'. Current, N. 50° W. 6'.
4.	ssw w.	3	bc	4	30.046	58.8	53.8	71	61.5	4	...	Cum. Cms.	
6.	sw w.	2	c	...	30.050	58.8	54.5	75	61.0	9	...	Cum.	
8.	sw w.	2	c	...	30.050	59.8	54.8	71	61.2	10	Str.	Cum.	
10.	wb s w.	3	bc	...	30.065	62.8	56.3	65	61.2	8	Cir. cum.	Cum.	Birds seen were albatross and stormy petrel. Sp. gr. 192528.
Noon.	wb s w.	2	bc	...	30.064	61.8	56.0	68	63.0	8	Cir. str. & Cir.	Cum.	
2.	wb s w.	3	bc	...	30.050	62.3	58.3	77	...	7	Cir. cum.	Cum.	
4.	wb s w.	3	bc	...	30.053	63.8	59.8	77	62.0	3	Cir. cum.	Cum.	
6.	wb s w.	3	bc	...	30.017	63.8	60.0	78	62.2	3	Cir. cum. & Str.	Cum.	Clouds from W.
8.	wb s w.	3	bc	...	29.985	60.8	59.0	89	62.5	6	...	Cum. str.	
10.	wb s w.	2	bc	...	30.002	60.8	58.3	85	62.2	4	Cir. & Cir. cum.	Cum.	
Midlt.	w. s. w.	1	bc	...	30.000	60.8	57.8	82	62.0	6	...	Cum.	
Totals.	...	32	bc	31	444	12.1	83.4	919	20.3	68	Cir. cum. & Str.	Cum.	
Mean.	w. s. w.	3		3	30.037	61.0	56.9	77	61.8	6	...	...	

## MONDAY, 13th.

2.	wb s w.	2	bc	...	29.988	58.8	56.8	88	62.0	7	Cir.	Cum. Cms.	At noon, lat. 33° 25' s., long. 74° 24' w. Temperature by self-registering thermo- meter, max. 63°, min. 57°.
4.	sw w w.	1	bc	...	29.974	59.8	56.3	79	61.5	3	...	Cum.	
6.	wb s w.	3	bc	...	30.009	60.3	56.8	79	62.0	4	...	Cum.	
8.	wb s w.	2	bc	...	30.094	60.8	57.8	82	62.2	4	Cir. cum.	Cum.	
10.	wb s w.	2	c	...	30.016	61.5	56.8	73	62.5	10	Cir. cum.	Cum.	Birds seen, sooty albatross and stormy petrel. Sp. gr. 192537. A large number of porpoise passed at 1 P.M. going to S. Observed several small pieces of sea- weed.
Noon.	wb s w.	2	c	1	30.033	59.0	55.8	81	...	10	...	Cum. & Str.	
2.	Variable.	4	bc	2	30.045	61.3	55.8	69	62.0	10	Cir. str.	Cum.	
4.	Variable.	1	bc	2	30.025	61.0	56.8	76	62.0	7	...	Cum. & Nlb.	
6.	sw w.	5	bc	3	30.054	59.8	54.8	71	62.0	9	...	Cum. & Str.	
8.	sw w.	3	bc	4	30.062	58.8	54.8	76	61.5	7	Cir. str.	Cum.	
10.	sw w.	4	bc	...	30.082	58.5	54.0	74	61.0	7	Cir. cum.	Cum.	
Midlt.	sw w.	2	bc	2	30.099	58.3	53.8	74	61.2	3	...	Cum.	
Totals.	...	31	bc	29	381	117.9	70.3	82	19.9	81	Cir. str. & Cir. cum.	Cum., Str., & Nimb.	
Mean.	w. s. w.	3		3	30.032	59.8	55.9	77	61.8	7	...	...	

## TUESDAY, 14th.

2.	sw w.	3	bc	3	30.100	57.8	52.8	71	62.2	3	...	Cum.	At noon, lat. 33° 31' s., long. 74° 43' w. Temperature by self-registering thermo- meter, max. 67°, min. 57°.
4.	sw w.	2	bc	3	30.100	58.5	54.3	75	62.0	5	...	Cum.	
6.	sw w.	2	bc	3	30.128	58.5	53.8	71	61.5	2	...	Cum.	
8.	sw w.	2	bc	3	30.167	60.8	54.8	67	...	4	...	Cum.	
10.	sw w.	2	bc	3	30.178	62.8	59.3	63	62.0	4	...	Cum.	Whale swimming round the ship for two hours in forenoon. Sp. gr. 192533.
Noon.	sw w.	2	bc	3	30.182	63.8	59.8	63	62.0	6	Cir.	Cum.	
2.	sw w.	2	bc	...	30.198	66.0	58.8	63	62.2	3	Cir.	Cum.	
4.	sw w.	2	bc	...	30.185	62.0	57.8	76	62.5	8	Str.	Cum.	
6.	sw w.	1	bc	3	30.177	60.8	57.0	78	62.2	6	Cir. cum.	Cum.	Phosphorescent patches.
8.	sw w.	3	bc	3	30.176	59.3	55.8	79	62.0	6	Cir. cum.	Cum.	
10.	sw w.	3	bc	2	30.178	59.8	56.8	82	62.0	7	Str.	Nimb.	
Midlt.	sw w.	3	bc	2	30.170	59.8	55.3	74	62.5	7	...	Str.	
Totals.	...	28	bc	28	1939	9.9	70.3	865	23.1	61	Cir., Str., & Cir. cum.	Cum.	
Mean.	sw w.	2		3	30.162	60.8	55.9	72	62.1	5	...	...	

## WEDNESDAY, 15TH DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometrice, infect to sea and Sea Level.	Thermometer.		Humidity.	Sat. Temp. of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.s.w.	2	cp	...	30.132	58.5	56.9	84	62.5	7	...	Cum.	At noon, lat. 33° 12' s. long. 76° 29' w. Temperature by self-registering thermometer, max. 66°, min. 56° 5.
4.	s.w.s.	4	cp	...	30.126	58.5	54.8	77	62.5	10	...	Cum.	
6.	s.w.w.	1	c	...	30.151	58.0	55.8	86	62.2	10	...	Cum.	
8.	s.w.w.	3	bc	...	30.160	59.3	55.8	79	62.0	8	...	Cum	
10.	s.w.w.	3	bc	...	30.148	62.8	58.8	77	62.2	4	...	Cum.	Current, s. 49° w. 4. One or two albatross and petrel seen. Sp. gr. 1.02542.
Noon.	s.w.w.	3	bc	...	30.152	63.8	58.8	72	62.5	2	Cir.	Cum.	
2.	s.w.s.	3	bc	...	30.158	63.8	60.3	73	63.0	4	Cir.	Cum.	
4.	s.w.w.w.	3	bc	...	30.149	64.8	59.8	73	63.0	7	Cir.	Cum.	
6.	s.w.w.w.	1	bc	...	30.127	63.5	59.8	78	63.0	3	...	Cum.	Long swell, clouds from s.w.
8.	s.w.s.	0	cc	...	30.094	61.3	58.0	81	63.0	8	...	Cum.	
10.	s.w.s.	0	cc	...	30.114	60.8	58.8	88	63.0	10	Cm.&Str	Cum.	
Midd.	s.w.s.	1	e	...	30.040	60.8	57.8	82	63.0	10	Cir.	Cum.	
Totals.	...	22	b, p	19	1551	17.4	54.5	950	31.9	83	Cir.	Cum.	
Mean.	s.w.s.	2	b, p	2	30.129	61.4	57.9	79	62.7	7			

## THURSDAY, 16TH.

2.	w.s.	1	bc	2	30.079	60.8	57.8	82	63.0	9	Crst.&Crem	...	At noon, lat. 32° 58' s. long. 77° 6' w. Temperature by self-registering thermometer, max. 71°, min. 59°.
4.	w.s.s.	0	bc	2	30.057	60.3	56.8	79	63.0	3	...	Cum.	
6.	s.w.w.w.	1	bc	2	30.094	60.8	57.8	82	63.2	8	Cir cum.	Cum.	
8.	Cum.	0	bc	1	30.102	61.8	58.8	82	63.2	5	Cir cum.	Cum.	
10.	Cum.	0	bc	1	30.097	64.8	59.8	73	63.5	9	Cir str.	Cm.&Str.	Current, s. 8°. Sp. gr. 1.02542. Sooty albatross and stormy petrel seen.
Noon.	s.w.s.	1	bc	1	30.123	67.8	61.8	68	64.7	6	Cir str.	Cum.	
2.	Variable.	0	bc	1	30.127	68.8	61.8	64	66.0	4	Cir.	Cum.	
4.	s.e.	1	bc	...	30.122	66.8	61.8	73	65.8	5	Cir cum.	Cum.	
6.	s.e.	2	bc	2	30.127	62.8	58.8	77	64.0	4	Cr.&Crem.	Cum.	
8.	s.s.e.e.	2	bc	...	30.140	62.3	58.8	79	63.5	8	...	Cum.	
10.	s.s.e.e.	3	bc	2	30.184	61.8	57.8	77	63.2	8	...	Cm.&N.b.	
Midd.	s.s.e.e.	4	bcq	2	30.174	60.8	56.8	77	63.0	8	...	Cm.&Cmst	
Totals.	...	15	bc	16	1426	39.6	108.6	73	46.1	80	Cir cum.	Cum., Str., & Cum str.	
Mean.	s.w.w.	1	bc	2	30.119	63.3	59.1	76	63.8	7	Cir str.		

## FRIDAY, 17TH.

2.	s.e.e.	3	e	...	30.165	59.8	55.8	76	63.0	10	...	Cum.	At noon, lat. 33° 42' s. long. 78° 18' w. Temperature by self-registering thermometer, max. 68°, min. 58° 5. Current, s. 45° w. 16°.
4.	s.e.	2	e	...	30.161	60.3	55.8	74	63.0	8	Cir str.	Cum.	
6.	s.w.w.	3	e	...	30.190	59.8	55.8	76	63.0	10	...	Cum.	
8.	s.w.	3	bc	1	30.224	60.8	57.3	79	62.0	9	...	Str.	
10.	s.w.w.	2	bc	1	30.220	61.8	57.3	75	62.5	8	...	Cm.&Str.	A few stormy petrel. Sp. gr. 1.02530.
Noon.	s.w.w.w.	2	bc	1	30.215	62.8	58.5	76	62.5	8	...	Cum.&Cmst	
2.	s.w.w.	3	e	2	30.220	63.5	58.8	73	62.7	10	...	Cm.&Cmst	
4.	s.w.w.	2	bc	2	30.190	64.8	59.8	73	62.5	7	...	C.&Cmst	
6.	s.w.s.	3	e	1	30.177	61.5	57.5	77	62.7	9	Cir cum.	Cum str.	
8.	s.w.w.	4	e	1	30.184	59.8	56.3	79	63.0	10	...	Cm.&Cmst	
10.	s.w.w.	3	e	1	30.168	60.0	56.3	78	63.5	10	...	Cum.	
Midd.	s.w.s.	3	e	1	30.148	60.8	58.3	85	63.2	9	...	Cum.	
Totals.	...	33	bc	11	2262	15.7	87.5	81	33.6	108	Cir str.	Cum., Str., & Cum str.	
Mean.	s.s.w.	3	bc	1	30.188	61.3	57.3	77	62.8	9	Cir cum.		

## SATURDAY, 18TH DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.b.w.	5	bc	3	30.103	59.5	55.8	77	62.0	7	...	Cum. & Nb.	At noon, lat. 34° 21' s. long. 79° 11' w. Temperature by self-registering thermometer, max. 63° 5, min. 57° 2. Current, s. 20° w. 10'. Wind drawing to E. Sp. gr. 1.02535.
4.	s.b.w.	4	bc	2	30.117	59.5	55.8	77	62.0	5	...	Cum str.	
6.	s.b.w.	5	c	3	30.198	58.8	54.3	74	61.8	10	...	Cum. & Cum str.	
8.	s.b.w.	5	c	3	30.234	58.8	54.8	76	...	10	...	Cum str.	
10.	s.b.w.	4	c	3	30.259	60.8	55.8	702	61.5	9	...	Cum str.	
Noon.	s.b.w.	5	bc	3	30.266	62.8	56.8	67	61.7	7	...	Cum.	
2.	s.b.e.	4	bc	...	30.173	62.8	56.8	67	61.7	7	...	Cum str.	
4.	s.b.e.	5	bc	...	30.279	60.0	55.8	75	61.7	7	...	Cum str.	
6.	s.b.e.	4	c	3	30.316	59.8	55.5	75	61.7	9	...	Cum.	
8.	s.b.e.	5	c	3	30.342	57.8	54.8	81	61.0	10	...	Cum.	
10.	s.b.e.	4	c	4	30.341	58.3	55.8	74	61.0	10	...	Cum str.	
Midt.	s.b.e.	5	c	4	30.370	57.8	54.3	79	60.5	10	...	Cum str.	
Totals.	...	53	...	31	2298	116.7	64.3	54	16.6	101	...	Cum. & Cum str.	
Mean.	s.	4	...	3	30.250	59.7	55.4	74	61.5	8	...	Cum. & Cum str.	

## SUNDAY, 19TH.

2.	s.b.e.	5	c	...	30.343	57.8	53.5	75	60.7	10	...	Cum.	At noon, lat. 35° 18' s. long. 81° 49' w. Temperature by self-registering thermometer, max. 62° 5, min. 55° 5. Current, s. 5° w. 19'. Sooty albatross, mutton birds, and stormy petrel seen. Sp. gr. 1.02555.
4.	s.b.e.	3	c	...	30.349	57.8	52.8	74	...	9	...	Cum.	
6.	s.b.e.	4	c	...	30.377	57.3	53.5	76	60.2	10	...	Cum.	
8.	s.b.e.	3	c	3	30.396	57.3	53.8	78	60.0	10	...	Cum.	
10.	s.b.e.	5	c	3	30.413	57.8	54.8	81	60.5	10	...	Cum str.	
Noon.	s.b.e.	3	c	3	30.403	59.8	56.8	82	61.0	10	...	Cum.	
2.	s.b.e.	3	bc	2	30.355	61.8	57.8	77	61.0	7	...	Cir.	
4.	s.b.e.	3	c	2	30.361	59.8	58.0	89	61.0	9	...	Cum. & Nb.	
6.	s.b.e.	4	c	2	30.392	60.3	57.3	82	...	9	...	Cum.	
8.	s.b.e.	5	c	2	30.395	59.8	56.8	82	61.2	10	...	Cum.	
10.	s.b.e.	3	c	3	30.393	58.3	55.3	81	60.0	10	...	Cum str.	
Midt.	s.b.e.	4	c	2	30.356	56.8	55.3	90	59.5	10	...	Cum str.	
Totals.	...	45	...	22	1554	104.6	65.7	967	5.1	114	...	Cir str.	Cum. & Cum str.
Mean.	s.b.e.	4	...	2	30.379	58.7	55.5	81	60.5	9	...	Cir str.	Cum. & Cum str.

## MONDAY, 20TH.

2.	s.b.e.	4	oc	2	30.355	57.8	55.3	84	59.5	10	...	Cum. & Nb.	At noon, lat. 36° 26' s. long. 84° 3' w. Temperature by self-registering thermometer, max. 60° 5, min. 54° 5. Current, s. 36° E. 19'. Albatross and stormy petrel seen. Sp. gr. 1.02537.
4.	s.b.e.	3	oc	2	30.399	55.8	54.8	93	59.5	10	...	Cum str. & Nb.	
6.	s.b.e.	3	c	2	30.331	56.8	54.8	87	59.0	10	...	Cum.	
8.	s.b.e.	2	c	1	30.320	57.8	54.8	81	59.7	10	...	Cum str.	
10.	s.b.e.	2	c	2	30.322	58.8	55.3	79	60.0	10	...	Cum. & Cum str.	
Noon.	s.b.e.	2	c	2	30.297	59.8	55.8	76	60.0	10	...	Cum. & Cum str.	
2.	s.b.e.	2	c	2	30.272	59.8	55.8	76	60.5	10	...	Cum.	
4.	s.b.e.	2	c	2	30.236	59.3	56.3	82	60.2	10	...	Cum.	
6.	s.b.w.	2	c	1	30.218	59.0	56.3	84	60.5	10	...	Cum. & Str.	
8.	s.b.e.	2	c	1	30.192	57.3	56.3	93	60.5	10	...	Cum.	
10.	s.b.e.	3	oc	2	30.197	56.5	54.3	86	60.5	9	...	Cum. & Str.	
Midt.	s.b.e.	2	oc	2	30.167	56.3	54.8	90	60.5	10	...	Cum. & Str.	
Totals.	...	28	...	21	3216	95.0	64.6	1011	0.4	119	...	Cum., Str., & Cum. str.	
Mean.	s.b.e.	2	...	2	30.268	57.9	55.4	84	60.0	10	...	Cum., Str., & Cum. str.	

## TUESDAY, 21st DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	s.w.	12	opdm	12	30.133	55.8	54.8	93	59.8	10	...	Cum. & Cumst	At noon, lat. 37° 5' S., long. 83° 22' W. Temperature by self-registering thermometer, max. 59° 2', min. 54° 0'. Current, N. 62° W. 6'. Albatross seen. Sp. gr. 1.02537. 8 P.M., passed several belts of crustacea.
4.	s.w.	4	becpdm	12	30.115	55.8	54.8	93	59.8	7	Cir.	Cum. & Nub.	
6.	s.w.	3	o	12	30.140	56.8	54.0	82	59.0	10	...	Str.	
8.	s.w.	3	becp	12	30.148	56.8	55.8	93	59.2	6	...	Cum.	
10.	s.w.	4	bed	12	30.137	56.8	56.0	94	60.0	7	...	Cum.	
Noon.	s.e.	3	cdm	1	30.130	57.8	56.5	92	59.7	10	...	Cum.	
2.	s.e.	4	cpd	12	30.135	57.8	56.8	93	59.7	10	...	Cum. & Nub.	
4.	s.e.	3	e	12	30.162	57.8	56.8	93	59.7	8	...	Cum. & Str.	
6.	s.w.	4	be	12	30.118	58.8	56.0	83	...	7	...	Cum. & Cumst	
8.	s.w.	3	becp	1	30.137	57.8	55.8	87	59.0	8	...	Cum. & Nub.	
10.	s.e.	4	e	1	30.141	57.3	55.0	85	59.2	10	...	Cum.	
Midt.	s.e.	3	be	1	30.143	56.5	53.5	81	59.2	6	Cir.	Cum.	
Totals.	...	49	cpd	20	1579	85.8	65.8	109	53	99	Cir.	Cum., Str., & Nub.	
Mean.	s.	3		2	30.132	57.1	55.5	89	59.5	8			

## WEDNESDAY 22d.

2.	s.e.	4	be	2	30.178	55.8	51.8	75	59.0	8	...	Cum.	At noon, lat. 37° 29' S., long. 84° 2' W. Temperature by self-registering thermometer, max. 62°, min. 54°. Current, N. 18° E. 13'. Albatross, Cape pigeon, and stormy petrel seen. Sp. gr. 1.02541.
4.	s.w.	3	be	2	30.170	55.3	50.8	73	59.0	4	...	Cum.	
6.	s.w.	4	be	...	30.199	55.3	49.8	68	59.5	5	Cir.	Cum str.	
8.	s.e.	2	be	2	30.214	56.8	51.8	70	59.0	4	Cir.	Cum. & Str.	
10.	s.w.	2	be	1	30.225	59.3	53.8	68	59.0	5	Cir.	Cum.	
Noon.	s.e.	1	e	1	30.240	60.8	54.8	67	59.5	10	...	Cum.	
2.	s.e.	1	be	1	30.244	60.5	53.8	63	60.0	5	Cir cum.	Cum str.	
4.	s.w.	2	be	...	30.246	55.8	52.3	78	59.7	5	Cir.	Cum.	
6.	s.e.	1	be	2	30.262	58.5	53.3	70	60.0	4	Cir. & Cum.	Cum.	
8.	s.e.	3	be	2	30.275	55.8	52.8	81	59.2	4	Cir str.	Cum.	
10.	s.e.	4	becp	4	30.294	54.8	52.3	84	59.5	7	...	Cum. & Nub.	
Midt.	s.e.	2	be	4	30.287	54.8	50.8	75	59.5	6	...	Cum.	
Totals.	...	29	be	21	2834	83.5	28.1	872	49	67	Cir. & Cir cum.	Cum. & Str.	
Mean.	s.e.	2		2	30.236	56.9	52.3	73	59.4	6			

## THURSDAY, 23d.

2.	s.e.	3	be	3	30.286	54.8	50.8	75	58.2	5	...	Cum.	At noon, lat. 38° 59' S., long. 83° 53' W. Temperature by self-registering thermometer, max. 59° 8', min. 53° 0'. Current, N. 41° W. 11'. Albatross seen. Sp. gr. 1.02517.
4.	s.e.	2	be	2	30.280	54.8	50.8	75	58.0	7	...	Cum.	
6.	s.e.	2	be	2	30.316	55.3	51.8	78	57.8	3	Cir.	Cum.	
8.	s.e.	3	becp	3	30.337	55.3	51.8	78	58.5	5	...	Cum. & Str.	
10.	s.e.	2	becp	3	30.357	57.8	52.8	71	58.5	9	...	Cum. & Cumst	
Noon.	s.e.	4	be	3	30.368	58.8	53.8	71	57.5	6	...	Cum.	
2.	s.e.	3	be	2	30.380	57.8	52.8	71	57.5	6	Cir.	Cum.	
4.	s.e.	4	be	3	30.380	56.8	52.3	72	57.5	6	Cir.	Cum.	
6.	s.e.	3	be	3	30.395	56.0	51.3	72	...	7	...	Cum.	
8.	s.e.	4	e	3	30.408	55.8	51.8	75	57.5	10	...	Cum. & Str.	
10.	s.e.	3	cpd	3	30.419	53.8	50.8	80	57.5	8	...	Cum. & Cumst	
Midt.	s.e.	5	eq	3	30.401	54.3	50.8	77	57.0	10	...	Cum. & Cumst	
Totals.	...	38	becp	33	4327	71.3	21.6	55	85	82	Cir.	Cum., Str., & Cum str.	
Mean.	s.e.	3		3	30.361	55.9	51.8	75	57.8	7			

## FRIDAY, 24TH DECEMBER 1875.

Hour.	Wind.		Weather	State of Sea, 0 to 4.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.		
	True Direction.	Force.			Dry Bulb.	Damp Bulb.				Upper.	Lower.			
2.	s.w.	...	12	bcp	3	30.418	53.8	50.3	77	57.0	7	...	Cum.&Str.	At noon, lat. 39° 52' s. long. 86° 39' w. Temperature by self-registering thermo- meter, max. 56° 5', min. 51° 0'. Current, S. 7° E. 18'. A few stormy petrel seen. Sp. gr. 1.02523.
4.	s.w.	...	12	bcp	3	30.400	52.8	50.3	83	57.0	5	...	Cum.	
6.	s.w.	...	4	e	...	30.435	51.8	50.3	90	56.5	9	...	Cum.&Cmst	
8.	s.w.	...	3	e	...	30.455	54.8	50.8	75	56.7	10	...	Cum.&Str.	
10.	s.w.	...	4	bc	3	30.459	54.8	52.8	87	57.0	6	...	C.Cst.&Xb.	
Noon.	s.w.	...	3	e	3	30.485	55.8	51.8	75	57.7	10	...	Cum.&Str.	
2.	s.w.	...	4	e	3	30.490	55.8	51.8	75	57.7	10	...	Cum.&Str.	
4.	s.w.	...	3	e	3	30.493	55.8	51.8	75	57.5	10	...	Cum.&Str.	
6.	s.w.	...	4	e	...	30.494	54.8	51.8	81	57.8	10	...	Cum.	
8.	s.w.	...	12	cyp	...	30.483	53.3	50.8	83	57.5	10	...	Cum.&Str.	
10.	s.w.	...	4	cyp	...	30.477	52.8	50.8	86	57.2	10	...	Cum.&Str.	
Midt.	s.w.	...	12	oc	...	30.513	53.8	49.8	71	55.5	10	...	Cum.&Str.	
Totals.	...	...	40	...	...	5602	50.1	13.1	961	85.1	107	...	Cum., Str., & Cum str.	
Mean.	s.w.	...	3	...	3	30.467	54.2	51.1	80	57.1	9	...		

## SATURDAY, 25TH.

2.	s.	...	12	eq	3	30.524	53.3	49.8	77	56.5	10	...	Cum.&Cmst	At noon, lat. 40° 35' s. long. 89° 25' w. Temperature by self-registering thermo- meter, max. 59° min. 51°. Current, N. 7° E. 13'. No birds. Sp. gr. 1.02523.
4.	s.w.	...	5	bcp	3	30.535	51.8	48.8	80	56.2	8	...	Cum.&Str.	
6.	s.w.	...	12	e	...	30.576	52.8	48.8	74	57.0	10	...	Cum.	
8.	s.s.w.	...	4	e	...	30.597	52.8	48.8	74	57.0	10	...	Cum.&Str.	
10.	s.w.	...	12	bc	12	30.596	55.0	51.8	80	57.2	8	...	Cum.	
Noon.	s.s.w.	...	12	bc	12	30.603	55.3	52.8	84	57.5	7	...	Cum.&Str.	
2.	s.w.	...	3	bc	12	30.598	55.8	52.8	81	57.0	7	...	Cum.&Str.	
4.	s.w.s.	...	12	bc	12	30.594	55.8	52.8	81	57.0	9	...	Cum.&Str.	
6.	s.w.	...	3	bc	12	30.574	54.8	53.3	90	57.0	8	...	Cum.	
8.	s.w.	...	3	cp	12	30.523	53.8	53.3	97	56.7	10	...	Cum.&Str.	
10.	s.w.	...	3	cp	2	30.561	54.8	52.8	87	56.5	10	...	Cum.	
Midt.	s.	...	3	cp	2	30.544	54.0	52.8	92	56.5	10	...	Cum str.	
Totals.	...	...	34	...	24	6825	50.0	18.6	997	101	107	...	Cum. & Str.	
Mean.	s.	...	3	...	2	30.569	54.2	51.5	83	56.8	9	...		

## SUNDAY, 26TH.

2.	s.	...	3	e	3	30.505	53.5	51.8	88	56.7	10	...	Str.	At noon, lat. 41° 9' s. long. 87° 40' w. Temperature by self-registering thermo- meter, max. 57° min. 51° 5'. Current, N. 50° w. 8'. No birds. Sp. gr. 1.02527. Lower clouds and sand passing over rapidly.
4.	s.s.w.	...	4	eq	...	30.484	53.3	52.0	91	56.7	10	...	Cum.&Str.	
6.	s.w.	...	4	cp	...	30.514	54.8	52.8	87	56.7	10	...	Cum.&Str.	
8.	s.w.	...	4	e	3	30.519	54.8	52.8	87	57.0	10	...	Cum.&Cmst	
10.	s.w.	...	3	bc	2	30.498	55.8	54.3	90	57.0	5	...	Cum.	
Noon.	s.	...	3	cp	2	30.502	55.5	54.3	92	...	10	...	Cum.	
2.	s.s.w.	...	3	e	...	30.482	55.5	54.3	92	56.5	10	...	Cum.	
4.	s.s.w.	...	3	e	...	30.471	55.8	54.5	91	56.5	10	...	Cum.	
6.	s.s.w.	...	2	e	1	30.471	55.5	54.3	91	...	10	...	Cum.	
8.	s.s.w.	...	4	e	3	30.445	55.8	52.8	93	55.0	8	...	Cum.	
10.	s.w.	...	5	e	3	30.444	55.8	53.3	97	54.0	10	...	Str.	
Midt.	s.s.w.	...	5	e	3	30.446	55.8	52.8	93	54.0	10	...	Str.	
Totals.	...	...	43	...	20	5781	55.9	40.0	12	60.1	113	...	Cum. & Str.	
Mean.	s.w./w.	...	4	...	2	30.482	54.7	53.3	91	56.0	9	...		

## MONDAY, 27TH DECEMBER 1875.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 30° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	s.s.w.	5	cy	...	30.362	53.5	52.5	93	55.0	10	Str.	Cum.	At noon, lat. 42° 22' s. long. 84° 29' w. Temperature by self-registering thermometer, max. 53° 5, min. 50° 5. Current, s. 36° w. 14'.
4.	s.s.w.	4	c	...	30.360	52.5	51.8	95	54.7	10	Str.	Cum.	
6.	s.s.w.	4	om	...	30.382	51.8	51.3	97	54.0	10	...	Str.	
8.	s.s.w.	4	cy	...	30.389	52.3	51.3	93	54.7	10	...	Cum.&Str.	
10.	s.w.	4	cm	...	30.389	52.3	51.3	93	54.7	10	...	Cum.&Str.	
Noon.	s.w.	4	om	...	30.371	52.3	51.3	93	55.0	10	...	Cum.&Str.	
2.	s.w.	4	om	...	30.374	52.8	51.3	90	55.0	10	...	Cum.&Str.	
4.	s.	4	oc	...	30.366	52.8	50.8	86	55.0	10	...	Cum.	
6.	s.e.	4	o	...	30.340	52.8	51.8	93	55.0	10	...	Cum.&Str.	
8.	s.	4	oc	...	30.324	52.8	51.8	93	55.0	10	...	Cum.&Str.	
10.	s.	3	omd	...	30.322	52.3	51.8	97	54.7	10	...	Str.	
Midd.	s.	4	omd	...	30.300	51.8	51.8	100	54.5	10	...	Str.	
Totals.	...	48		20	30.379	53.0	51.8	43	57.3	120	Str.	Cum. & Str.	
Mean.	s.w.	4	omd	3	30.357	52.5	51.6	94	54.8	10			

## TUESDAY, 28TH.

2.	s.w.	4	opd	3	30.226	51.3	50.8	97	55.5	10	...	Str.	At noon, lat. 42° 43' s. long. 82° 11' w. Temperature by self-registering thermometer, max. 58°, min. 50°. Current, w. 10'. 2 a.m., sky clear above the sea. Albatross, Cape pigeon, and petrel seen. Sp. gr. 1.02531.
4.	s.w.	4	opd	4	30.249	51.3	50.8	97	54.5	10	...	Str.	
6.	s.s.w.	3	f	4	30.273	51.8	51.3	97	...	10	...	Str.	
8.	s.s.w.	4	fip	...	30.270	53.3	52.5	95	54.5	10	...	Str.&Cum.	
10.	s.s.w.	3	cpd	3	30.279	54.8	50.3	73	55.0	10	...	Str.&Cum.	
Noon.	s.s.w.	2	bcpd	3	30.281	55.8	54.3	90	55.0	5	...	Cum.&Str.	
2.	s.	3	bcpd	3	30.255	55.8	53.8	87	55.0	6	...	Cum.	
4.	s.w.	1	bcpd	3	30.259	55.8	53.8	87	55.0	8	...	Cum.	
6.	s.s.w.	2	bcpd	4	30.229	53.8	52.8	93	55.0	10	...	Cum.&Str.	
8.	s.	2	cp	1	30.224	52.8	51.5	91	54.7	10	...	Cum.&Str.	
10.	s.w.	4	opd	3	30.259	52.3	50.3	86	54.7	10	...	Cum.&Str.	
Midd.	s.w.	2	bc	2	30.258	52.8	49.8	80	54.7	8	...	Cum.&Str.	
Totals.	...	35		32	30.272	51.6	50.0	1073	51.6	105	...	Cum str. & Niub.	
Mean.	s.w.	3	bcpd	3	30.256	53.5	51.8	89	54.7	9			

## WEDNESDAY, 29TH.

2.	s.	2	c	3	30.208	52.8	49.8	80	54.0	10	...	Cum.&Cum.	At noon, lat. 43° 15' s. long. 80° 0' w. Temperature by self-registering thermometer, max. 56°, min. 50° 5. Current, none. One or two sooty albatross and a few porpoise seen. Long swell. Sp. gr. 1.02505.
4.	s.	3	c	2	30.212	52.8	49.8	80	54.0	10	...	Cum.&Str.	
6.	s.w.	3	c	3	30.211	52.8	50.5	84	54.0	10	...	Cum.	
8.	s.w.	4	c	...	30.194	53.3	49.8	77	54.0	10	...	Cum.	
10.	s.w.	2	c	2	30.198	53.8	50.5	78	54.5	10	...	Cum.	
Noon.	s.w.	3	bc	2	30.200	54.5	51.3	78	54.5	6	Cir cum.	Str.	
2.	s.w.	2	bc	2	30.209	54.8	51.3	78	54.7	2	Cir.&Str.	Cum.	
4.	s.w.	2	bc	...	30.195	55.3	53.3	87	54.7	3	Cir.	Cum.	
6.	s.w.	3	bc	3	30.206	54.8	52.8	87	55.0	2	Cir.	Cum.	
8.	s.w.	4	bc	3	30.179	53.8	52.3	90	55.5	7	...	Str. cum.	
10.	s.w.	2	bc	...	30.186	54.3	52.8	90	55.5	10	...	Cum str.	
Midd.	w.s.w.	3	cm	...	30.169	54.0	53.8	98	55.5	9	...	Cum str.	
Totals.	...	33		20	30.207	47.0	48.0	1007	79	89	Cir. & Str.	Cum., Str., & Cum str.	
Mean.	swbs.	3	bcm	2	30.197	53.9	51.5	84	54.7	7			

## METEOROLOGICAL OBSERVATIONS.

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THURSDAY, 30TH DECEMBER 1875.

Hour.	Wind.		Weather	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.			Humidity, Sat. %.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Wet Bulb.					Upper.	Lower.	
2.	w.s.w.	12	cpd	3	30.185	53.3	52.3	93	55.0	10	...	Str.&Cum.		At noon, lat. 45° 14' s. long. 78° 32' w. Temperature by self-registering thermo- meter, max. 59°, min. 52°.
4.	sw <sup>1</sup> w.	4	c	12	30.173	53.3	52.3	93	54.5	10	...	Cum str.		
6.	w.s.w.	3	c	3	30.182	53.3	52.3	93	53.7	10	...	Cum.		
8.	w.s.w.	3	bc	12	30.147	53.8	52.8	93	54.0	3	Cir.	Cum str.		
10.	w.s.w.	5	cpd	3	30.140	53.8	52.8	93	55.0	10	Str.	Cum.		Current, N. 19° E. 4'.
Noon.	w.s.w.	3	cpd	4	30.118	53.8	53.3	97	55.0	...	...	Cum.		A few albatross seen. Sp. gr. 1°02487.
2.	w.s.w.	4	bc	...	30.078	54.8	53.0	88	55.0	8	...	Cum.		
4.	w.s.w.	3	...	...	30.089	57.0	53.5	78	54.5	...	...	Str.&Cum.		
6.	w.s.w.	4	bc	12	30.083	53.8	50.8	80	53.7	8	...	Str.&Cum.		
8.	sw <sup>1</sup> w.	3	bc	12	30.075	52.3	50.8	90	53.7	10	...	Cum str.		Sea phosphorescent.
10.	sw <sup>1</sup> w.	4	bc	12	30.077	52.3	49.8	83	54.2	8	Cir str.	Cum.		
Midd.	sw <sup>1</sup> w.	4	bc	3	29.968	52.8	50.3	83	54.5	8	...	Cum.		
Totals.	...	42	cpd	27	1315	44.3	24.0	1064	52.8	85		Cir. & Str.	Cum., Str., & Cum str.	
Mean.	sw <sup>1</sup> w.	3	...	3	30.109	53.7	52.0	89	54.4	8				

FRIDAY, 31st.

2.	sw <sup>1</sup> w.	4	c	2	29.964	52.8	50.8	86	54.7	10	...	Cum.		At noon, lat. 46° 51' s. long. 75° 44' w. Temperature by self-registering thermo- meter, max. 60°, min. 51°.
4.	sw <sup>1</sup> w.	3	cm	3	29.953	52.5	51.8	95	54.7	10	...	Cum str.		
6.	sw <sup>1</sup> w.	4	cm	...	29.977	51.8	52.3	97	54.7	10	...	Str.		
8.	w.s.w.	3	cpd	3	29.962	52.3	51.3	93	54.7	10	...	Cm, Str. & Nb.		
10.	w.	4	cpd	4	29.954	52.8	52.3	97	54.7	10	...	Cm, Str. & Nb.		Sea a dark green colour.
Noon.	w.s.w.	5	cpd	5	29.950	51.8	53.8	93	54.7	10	...	Cm, Str. & Nb.		A long swell.
2.	w.s.w.	4	cm	3	29.902	55.8	54.8	93	57.0	9	Cir str.	Cum.		Sp. gr. 1°02292.
4.	w.s.w.	4	cm	12	29.896	57.3	54.8	78	57.2	10	Str.	Cum.		
6.	w.s.w.	4	cpd	...	29.874	57.0	54.5	84	56.5	9	...	Cum.		
8.	w.s.w.	2	cpd	...	29.890	55.8	54.0	88	...	10	...	Cm. & Str.		
10.	Calm.	0	oed	...	29.906	53.8	52.3	89	...	10	...	Cm. & Nb.		6.15 P.M., anchored in Port Otway.
Midd.	Calm.	0	bc	...	29.902	52.8	50.3	83	...	6	...	Cm. & Str.		
Totals.	...	37	cpd	22	11130	50.5	32.0	1076	48.9	114		Cir str.	Cum., Str., & Nimb.	
Mean.	w.	3	...	3	29.927	54.2	52.7	90	55.4	9				

SATURDAY, 1st JANUARY 1876.

2.	Calm.	0	bc	...	29.893	51.8	49.8	86	...	6	...	Cm. & Str.		At noon, lat. 47° 34' s. long. 74° 49' w. Temperature by self-registering thermo- meter, max. 56° 2', min. 49° 5'.
4.	w.s.w.	1	bc	...	29.925	50.8	49.3	90	...	7	...	Cum.		
6.	sw <sup>1</sup> s.	2	bc	...	29.958	52.8	49.8	80	55.8	7	...	Cum.		
8.	s.w.	5	bc	4	29.976	52.8	49.8	80	55.7	4	Cir.	Cum.		
10.	s.w.	4	bc	4	29.973	52.8	48.8	74	56.0	7	Cir. & Cum.	Str.		5 A.M., left Port Otway.
Noon.	w.s.w.	3	bc	3	30.002	53.8	50.8	80	55.5	7	Cir.	Str. & Cum.		Passed several pieces of kelp. Sp. gr. 1°02250.
2.	w.s.w.	3	c	...	30.018	53.8	51.8	86	55.0	10	...	Cum.		
4.	N.N.W.	3	oed	...	30.050	53.8	52.8	93	54.8	10	...	Cum.		
6.	w.s.w.	1	bc	...	30.054	55.5	54.0	90	55.7	8	...	Cum.		
8.	Calm.	0	bc	...	30.055	54.8	53.8	93	...	8	...	Cum.		6.45 P.M., anchored in Hale cove.
10.	N.N.E.	1	bc	...	30.085	54.3	52.8	90	...	8	...	Str. & Cum.		
Midd.	Variable.	0	bc	...	30.115	52.8	51.8	93	...	5	...	Cum.		
Totals.	...	23	bc	11	104	39.8	15.3	1035	38.5	87		Cir. & Cum.	Cum. & Str.	
Mean.	w.	2	...	4	30.069	53.3	51.3	86	55.5	7				

SUNDAY, 26 JANUARY 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	30.112	52.8	51.8	93	...	8	...	Cum.	At noon, lat. 48° 25' S., long. 74° 31' W. Temperature by self-registering thermometer, max. 63°, min. 51°. 4 A.M., left Hale Cove.
4.	Calm.	0	bc	...	30.121	52.3	51.3	93	...	10	...	Cum.	
6.	Calm.	0	er	...	30.158	53.3	51.3	86	55.0	9	...	Cum.	
8.	Calm.	0	bc	...	30.158	54.8	52.8	87	55.0	8	...	Cum.	
10.	Calm.	0	bc	...	30.140	59.0	55.8	81	57.0	8	...	Cum.	4 P.M., off Direction Island; passed several lumps of brash ice: surface water a creamy colour. Sp. gr. 1.004, temp. 44°. After passing Iceberg Sound the surface water gradually assumed its normal colour and temperature. 6.30 P.M., anchored in Gray harbour.
Noon.	Calm.	0	bc	...	30.121	61.3	56.8	75	57.5	9	...	Cm.&Str.	
2.	Calm.	0	bc	...	30.105	61.3	56.8	75	61.2	9	...	Cum.	
4.	Calm.	0	bc	...	30.087	58.8	54.8	76	44.0	6	...	Cum.	
6.	S.S.E.	1	bc	...	30.067	59.8	56.3	79	56.0	8	...	Cum.	
8.	S.	1	bc	...	30.068	59.3	55.8	79	...	8	...	Cum.	
10.	Calm.	0	bc	...	30.076	56.0	53.3	83	...	6	...	Cm.&Str.	
Midt.	Calm.	0	bc	...	30.062	55.0	52.8	86	...	6	...	Cum.	
Totals.	...	...	bc	...	1275	83.7	49.6	993	385.7	95	...	Cum. & Str.	
Mean.	Calm.	0	...	...	30.106	56.9	54.1	83	55.1	8	...	Cum. & Str.	

MONDAY, 30.

2.	Calm.	0	bc	...	30.050	51.8	51.0	94	...	7	...	Cum.	In Gray harbour. Temperature by self-registering thermometer, max. 70° 5, min. 49° 0.
4.	Calm.	0	ben	...	30.038	51.3	48.8	83	...	1	...	Cir.	
6.	Calm.	0	bc	...	30.035	52.8	51.8	93	57.5	1	...	Cum.	
8.	S.N.W.	1	bc	...	30.021	60.3	56.8	79	...	2	...	Cum.	
10.	S.	1	bc	...	29.993	63.5	57.8	69	...	7	...	Cum.	
Noon.	W.N.W.	1	bc	...	29.992	64.8	57.8	63	...	8	...	Cum.	
2.	W.S.W.	1	bc	...	29.944	67.8	59.8	60	...	8	...	Cir cum.	
4.	W.N.W.	1	bc	...	29.924	69.0	60.8	50	...	8	...	Cum.	
6.	W.N.W.	1	bc	...	29.904	68.8	59.8	56	58.0	8	...	Cir.	
8.	S.S.W.	1	bc	...	29.895	63.8	58.3	69	...	3	...	Cir.	
10.	Calm.	0	bc	...	29.893	58.8	55.8	82	...	3	...	Cir.	
Midt.	Calm.	0	bc	...	29.914	58.3	55.3	81	...	3	...	Cir.	
Totals.	...	7	bc	...	11603	731.0	73.8	888	...	59	...	Cir.	Cum.
Mean.	W.N.W.	1	...	...	29.967	60.9	56.1	74	57.8	5	...	Cir.	Cum.

TUESDAY, 4TH

2.	Calm.	0	bc	...	29.898	54.8	52.8	87	...	2	...	Cum.	At noon, lat. 48° 50' S., long. 74° 25' W. Temperature by self-registering thermometer, max. 64°, min. 50°. 10.45 A.M., left Gray harbour. 5.30 P.M., anchored in Port Gnappler.
4.	Calm.	0	bc	...	29.890	52.3	50.3	86	...	5	...	Cir.	
6.	Calm.	0	ben	...	29.887	52.8	51.3	90	51.2	7	...	Cum.	
8.	W.N.W.	1	ben	...	29.858	56.0	53.3	83	...	8	...	Cum.	
10.	Calm.	0	bc	...	29.800	59.8	56.0	77	...	10	...	Cm.&Str.	
Noon.	Calm.	0	bc	...	29.766	61.8	56.5	71	57.0	8	...	Str.	
2.	S.N.W.	2	c	...	29.737	62.3	54.8	60	55.0	10	...	Str.	
4.	S.N.W.	0	c	...	29.681	60.8	55.8	72	53.0	10	...	Str.	
6.	S.N.E.	2	c	...	29.651	57.3	54.8	84	53.5	10	...	Cum.	
8.	S.N.E.	1	er	...	29.584	54.3	52.8	90	...	10	...	Cum.	
10.	S.N.E.	1	or	...	29.527	52.8	51.8	93	...	10	...	Nimb.	
Midt.	W.S.W.	2	oc	...	29.603	49.8	46.8	80	...	10	...	Cum.	
Totals.	...	9	bc & cr	...	8872	674.8	37.0	973	19.7	100	...	Cir.	Cum., Str., & Nimb.
Mean.	S.N.W.	1	...	...	29.739	56.2	53.1	81	53.9	8	...	Cir.	

## WEDNESDAY, 5TH JANUARY 1876.

Hour.	Wind.		Weather	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Combs, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb's.	3	cy	...	29.652	49.0	45.8	78	...	10		Cum.	At noon, lat. 49° 59' s. long. 74° 27' w. Temperature by self-registering thermo- meter, max. 54°, min. 45°.
4.	swb's.	1	cy	...	29.749	46.8	44.8	86	...	10		Cum.	
6.	Variable.	1	bc	...	29.808	46.8	44.8	86	50.0	7		Cum.	
8.	s.s.w.	7	cy	...	29.848	47.8	45.3	82	51.5	8		Cum.	
10.	swb's.	6	cy	...	29.888	48.8	45.8	79	50.0	10		Cum.	4.30 a.m., left Port Grappler
Noon.	w.s.w.	4	bcpl	...	29.913	48.8	44.8	73	51.5	5		Cum.	Heavy squalls with light rain.
2.	s.w.	12	bcpl	...	29.956	49.8	46.3	77	51.7	6		Cum.	
4.	s.w.	6	bcpl	...	29.979	47.8	45.8	86	52.0	8		Cm.&Str.	5.45 p.m., anchored in Tom bay.
6.	s.s.w.	12	bcpl	...	30.013	48.8	45.3	76	51.5	9		Cum.	
8.	s.w.	1	bc	...	30.025	48.8	45.3	76	...	8		Cum.	
10.	s.w.	1	c	...	30.058	47.8	44.8	79	...	10		Cm.&Str.	
Midt.	Calm.	0	bc	...	30.066	46.8	44.8	86	...	8		Cm.&Str.	
Totals.	...	34	bcpl	...	10955	97.8	63.6	964	8.2	99		Cum. & Str.	
Mean.	swb's.	3	...	...	29.913	48.2	45.3	80	51.2	8		Cum. & Str.	

## THURSDAY, 6TH.

2.	...	...	...	...	...	...	...	...	...	...	...	...	In Tom bay. Temperature by self-registering thermo- meter, max. 57°, min. 51° 5.
4.	...	...	...	...	...	...	...	...	...	...	...	...	
6.	s.s.w.	1	bc	...	30.090	46.8	45.8	93	51.0	5	Cm.&Str.	Cum.	
8.	s.s.w.	2	bc	...	30.098	48.3	45.8	89	...	8	Cm.&Str.	Cum.	
10.	s.s.w.	1	bc	...	30.094	50.8	47.3	77	...	7	Cm. str.	Cum.	...
Noon.	s.s.w.	3	bc	...	30.080	54.3	50.3	74	...	6	Cm. str.	Cum.	
2.	s.s.w.	2	bc	...	30.066	55.8	50.3	68	...	7	...	Cm.&Str.	...
4.	s.s.w.	4	oc	...	30.051	53.8	48.8	69	...	10	...	Cm.&Str.	
6.	s.s.w.	12	ocpl	...	30.012	50.8	47.5	78	50.0	10	...	Cum.	...
8.	s.s.w.	3	ocpl	...	29.965	48.8	47.5	91	...	10	...	Cum.	
10.	s.s.w.	1	oc	...	29.951	48.8	47.3	90	...	10	...	Cum.	...
Midt.	s.s.w.	2	oc	...	29.915	48.8	47.8	93	...	10	...	Cum.	
Totals.	...	21	bc & oc	...	322	507.0	78.4	816	...	83	...	Cm. & Str.	
Mean.	s.s.w.	2	...	...	30.032	50.7	47.8	82	50.5	8	...	Cm. & Str.	

## FRIDAY, 7TH.

2.	NE'S.	5	oc	...	29.936	47.8	47.8	100	...	10		Nb.&Str.	In Tom bay. Temperature by self-registering thermo- meter, max. 55°, min. 45° 5.
4.	NE'S.	3	ocpl	...	29.844	48.3	47.8	97	...	10		Nimb.	
6.	N.E.	7	oc	...	29.811	49.3	48.3	93	50.5	10		Nimb.	
8.	N.E.	3	oc	...	29.776	50.8	49.8	93	...	10		Nimb.	
10.	NE'S.	7	oc	...	29.722	50.8	50.0	94	...	10		Nimb.	Sp. gr. 1.02138
Noon.	NE'S.	3	oc	...	29.636	51.8	51.3	97	...	10		Nimb.	
2.	s.s.w.	4	oc	...	29.608	54.3	54.3	100	...	10		Nimb.	...
4.	swb's.	5	oc	...	29.592	54.8	54.3	97	...	10		Nimb.	
6.	w.s.w.	2	oc	...	29.624	52.0	50.8	92	51.0	10		Nimb.	...
8.	s.w.	3	cy	...	29.689	50.8	48.8	86	...	10		Cum.	
10.	w.s.w.	2	cy	...	29.699	50.5	48.0	83	...	10		Cum.	...
Midt.	w.s.w.	2	c	...	29.704	50.5	47.8	81	...	10		Cum.	
Totals.	...	46	oc	...	8641	11.7	119.0	1113	...	120		Cum. & Nimb.	
Mean.	s.s.w.	4	...	...	29.720	51.0	49.9	93	50.8	10		Cum. & Nimb.	

SATURDAY, 8TH JANUARY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds (0 to 10).	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N. N. W.	1	bc	...	29.720	48.8	46.8	86	...	5	...	Cum.	At noon, lat. 50° 40' S. long. 74° 40' W. Temperature by self-registering thermo- meter, max. 51°, min. 44° 5'. 5 A.M., left Tom bay under steam.
4.	N.	1	bc	...	29.741	47.8	45.8	86	...	8	...	Cum.	
6.	N.E.	4	bcpr	...	29.771	49.5	45.3	72	50.5	8	Cir str.	Cum.	
8.	N.W.	5	ocpr	...	29.755	48.8	46.8	86	49.0	10	...	Cum.&Nb.	
10.	W. N. W.	12	ocpm	...	29.693	47.8	46.8	82	51.5	10	...	Cum.&Nb.	Sp. gr. 1.02212. 4.30 P.M., anchored in Puerto Bueno.
Noon.	N.W.W.	7	ocpm	...	29.622	51.5	48.8	85	50.5	10	...	Cum.&Nb.	
2.	N.W.W.	6	ocpr	...	29.582	50.0	47.8	83	49.0	9	...	Cum.&Nb.	
4.	N.W.W.	5	bcpr	...	29.592	50.8	48.3	83	49.0	9	...	Cum.&Nb.	
6.	W. N. W.	5	ocplt	...	29.601	49.0	46.3	93	...	10	...	Cum.&Nb.	...
8.	W.	7	ocpdt	...	29.669	45.8	44.8	93	...	10	...	Cum.&Nb.	
10.	W. N. W.	12	ocpdt	...	29.700	45.8	44.8	93	...	10	...	Cum.&Nb.	
Midt.	Calm.	0	bcpr	...	29.720	45.8	44.8	93	...	7	...	Cum.&Nb.	
Totals.	...	46	ocplt	...	8166	581.4	77.1	1033	1.5	107	Cir str.	Cum. & Nimb.	
Mean.	N. W.	4		...	29.680	48.4	46.4	86	50.2	9			

SUNDAY, 9TH.

2.	Calm.	0	bcpr	...	29.715	45.0	43.5	90	...	10	...	Cum.&Nb.	At Puerto Bueno. Temperature by self-registering thermo- meter, max. 50° 5', min. 43° 5'.
4.	N. N. W.	8	bcpr	...	29.766	46.8	45.0	87	...	7	...	Cum.&Nb.	
6.	N. N. W.	4	bcpr	...	29.781	46.8	45.3	90	49.5	9	...	Cum.&Nb.	
8.	N. N. W.	2	cpr	...	29.796	47.8	46.8	93	...	10	...	Cum.&Nb.	
10.	N. N. W.	3	cpr	...	29.805	48.3	45.8	83	...	10	...	Cum.&Nb.	...
Noon.	N. W.	2	bcpr	...	29.842	47.8	45.3	83	...	9	...	Cum.&Nb.	
2.	N. W.	2	cpd	...	29.878	49.8	46.8	83	...	10	...	Cum.	
4.	N.W.W.	4	ocpdt	...	29.896	48.8	46.8	86	...	10	...	Cum.	
6.	N. N. W.	2	ocp	...	29.904	48.0	47.8	98	49.7	10	...	Cum.	...
8.	N. N. W.	2	ocp	...	29.908	48.0	47.8	99	...	10	...	Cum.	
10.	N. N. W.	1	ocpr	...	29.904	48.3	47.3	93	...	10	...	Cum.&Nb.	
Midt.	N.	3	ocpdt	...	29.908	47.8	46.8	93	...	10	...	Cum.&Nb.	
Totals.	...	33	ocpdt	...	10103	93.2	75.0	1078	12	115		Cum. & Nimb.	
Mean.	N.W.½W.	3		...	29.842	47.8	46.2	90	49.6	10			

MONDAY, 10TH.

2.	N.W.	4	cpr	...	29.919	47.3	46.8	96	...	10	...	Cum.&Cmst	At noon, lat. 51° 40' S. long. 73° 59' W. Temperature by self-registering thermo- meter, max. 53°, min. 45° 8'. 5 A.M., left Puerto Bueno.
4.	N.W.	1	cpr	...	29.934	47.3	46.8	97	...	10	...	Cum.&Cmst	
6.	N.W.	3	bcpr	...	29.927	47.3	46.3	93	...	9	Cir str.	Cum.	
8.	N.W.	3	c	...	29.893	48.8	46.8	86	...	10	...	Cum str.	
10.	S. W.	2	bc	...	29.881	48.0	46.8	92	50.7	9	...	Cum.	4.30 P.M., anchored in Isthmus harbour.
Noon.	N.W.W.	2	bcpr	...	29.872	48.8	47.8	93	50.5	9	...	Cum.	
2.	W. S. W.	4	cpr	...	29.854	49.3	47.8	90	50.2	9	...	Cum.	
4.	N.W.N.	3	cpd	...	29.833	49.8	48.3	90	50.0	9	...	Cum.&Str.	
6.	N.W.W.	1	cpd	...	29.820	49.8	47.8	86	50.0	10	...	Cum.	...
8.	N.W.W.	1	oc	...	29.798	49.0	46.8	85	...	10	...	Cum.	
10.	Calm.	0	ocp	...	29.779	48.3	46.8	90	...	10	...	Cum.	
Midt.	N. N. W.	1	c	...	29.760	47.8	46.8	93	...	10	...	Cum.	
Totals.	...	25	cpd	...	10270	101.5	85.6	1091	14	115	Cir str.	Cum., Str., & Cum str.	
Mean.	N.W.W.	2		...	29.856	48.5	47.1	91	50.3	10			

## TUESDAY, 11th JANUARY 1876.

Hour.	Wind		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W.S.W.	1	cp		29.735	46.8	45.8	93	...	10	Nb.&Str		At noon, lat. 52° 50' S. long. 73° 51' W. Temperature by self-registering thermo- meter, max. 52° 2, min. 45° 0.
4.	Caln.	0	cp		29.735	46.3	45.3	93	...	10	Nb.&Str		
6.	W.N.W.	1	oc		29.767	46.3	45.8	97	49.5	10	Cm.&Cnst		
8.	Variable.	0	oc		29.776	47.3	46.3	93	49.7	10	Cm.&Cnst		
10.	S.W.	1	od		29.797	47.8	46.8	93	50.0	10	Cum.		5 A.M., left Isthmus bay.
Noon.	S.W.	2	or		29.834	50.0	49.0	93	50.0	10	Cum.		
2.	W.	1	bc		29.878	51.0	49.0	86	50.0	8	Cum.		3 P.M., anchored in Port Charruca.
4.	N.N.E.	1	bc		29.907	51.3	47.8	77	...	9	Cum.		
6.	N.N.E.	1	c		29.977	50.0	46.8	79	50.2	10	Cm.&Str		
8.	Caln.	0	od		30.022	48.8	47.8	93	...	10	Cum.		
10.	Caln.	0	c		30.054	47.8	46.8	93	...	10	Cum.		Midt.
Midt.	S.W.	1	bc		30.065	46.0	44.8	92	...	5	Cir cum.	Cum.	
Totals	...	9			10547	99.4	82.0	1082	299.4	112			
Mean.	W.N.W.	1	ocpr		29.879	48.3	46.8	90	49.9	9	Cir cum.	Cum., Str., & Nimb.	

## WEDNESDAY, 12th.

2.	W.N.W.	1	bc		30.086	46.8	44.8	86	...	6	Cir.	Cum.	At Port Charruca. Temperature by self-registering thermo- meter, max. 52° 5, min. 45° 2.
4.	S.W.	1	bc		30.088	46.8	44.8	86	...	9	Cir.	Cum.	
6.	N.N.W.	1	bc		30.095	48.8	46.3	83	49.5	8	Cum.	Cum.	
8.	N.N.W.	2	c		30.090	49.5	46.8	88	...	10	Cm.&Str		
10.	N.N.W.	4	cpd		30.073	50.8	49.0	88	...	10	Cm.&Cnst		5 A.M., left Port Charruca.
Noon.	N.N.W.	4	cd		30.086	51.3	50.0	91	...	10	Cum.		
2.	N.	2	cd		30.076	50.8	49.8	93	...	10	Cum.		Several seals, numerous gulls, and one Istris seen.
4.	N.N.W.	1	cp		30.080	51.0	49.8	92	...	10	Cum.		
6.	N.W.b.W.	4	od		30.071	51.5	49.5	86	50.0	10	Nimb.		
8.	N.	4	oc		30.029	50.8	48.8	86	...	10	Cum.		
10.	N.	1	ocdm		30.034	51.8	49.8	86	...	10	Cum str.		Midt.
Midt.	N.	4	ocpdm		30.019	50.8	48.8	86	...	10	Cum.		
Totals	...	26	bc & cp		827	0.7	98.2	91	...	113			
Mean.	N.W.	2	cp		30.069	50.1	48.2	88	49.8	9	Cir.	Cum., Cum str., & Nimb.	

## THURSDAY, 13th

2.	N.	4	odm		29.982	50.5	49.5	93	...	10		Nimb.	At noon, lat. 53° 35' S. long. 72° 20' W. Temperature by self-registering thermo- meter, max. 56° 5, min. 48° 5.
4.	N.	0	ocp		29.964	50.5	49.3	92	...	10		Nimb.	
6.	W.b.W.	7	cpm		29.927	49.8	48.8	93	...	10		Cm.&Xh.	
8.	N.W.b.W.	8	cpm		29.880	49.8	48.8	93	49.0	10		Cm.&Str.	
10.	N.W.	8	cpm		29.900	50.3	49.3	93	48.7	10		Cm.&Str.	6.30 P.M., anchored in Port Famine.
Noon.	N.W.	6	cpm		29.812	51.8	49.8	86	47.0	10		Cm.&Str.	
2.	N.W.b.W.	6	cpd		29.643	51.8	49.8	86	46.5	10		Cm.&Xh.	
4.	W.N.W.	6	cpd		29.599	50.8	49.8	93	46.5	10		Cm.&Cnst	
6.	N.N.W.	2	cp		29.522	55.3	51.8	78	47.8	8		Crem.&Cm	Sp. gr. 1.02229.
8.	W.N.W.	2	bc		29.504	55.3	50.8	72	...	8		Crem.&Cm	
10.	W.N.W.	2	bc		29.404	53.8	49.8	74	...	8		Cm.&Xh.	
Midt.	W.S.W.	5	cp		29.400	53.3	50.3	80	...	10		Cm.&Str.	
Totals	...	59	cpm		8547	23.0	117.8	1033	45.5	114			
Mean.	sw.b.w.	5	cp		29.712	51.9	49.8	86	47.6	9		Cum., Str., & Nimb.	

## FRIDAY, 14th JANUARY 1876.

Hour	Wind.		Weather	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea Level	Thermometer.		Humidity.	Temperature of Sea Surface.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Wet Bulb.			Upper.	Lower.	
2.	s.w.	8	ocpy		29.531	46.8	43.8	79	...	10	Cum.&Nb	At Sandy Point.
4.	s.w.	6	bcy		29.609	44.8	42.3	81	...	10	Cir.	Temperature by self-registering thermometer, max. 93°, min. 43° 5.
6.	w.	3	bc		29.745	46.5	43.8	81	48.0	6	Cir str.	Cum.
8.	w.	3	bc		29.733	49.8	45.8	74	...	6	Cir str.	Cum.
10.	w.s.w.	3	bc		29.744	52.3	46.3	61	...	4	Cir.	Midnight to 1 A.M., a fine lunar rainbow.
Noon.	s.s.e.	1	bc		29.745	53.3	49.3	71	...	4	Cir.	Cum.&Str.
2.	s.s.e.	1	bc		29.739	53.8	49.3	72	...	6	Cir str.	Cum.
4.	s.s.	1	bc		29.739	53.8	49.8	74	...	7	Cir str.	5 A.M., left Port Famine.
6.	s.s.e.	3	bc		29.721	55.3	50.8	75	...	7	Cir str.	9 A.M., anchored at Sandy Point.
8.	s.s.e.	1	e		29.711	51.8	48.8	80	...	8	Cum.	Cum.
10.	Calm.	0	e		29.684	50.8	47.8	80	...	10	Cum.&Str.	Cum.
Midd.	Calm.	0	e		29.648	49.8	47.3	83	...	10	Cum.	Cum.
Totals		30			8315	8.8	84.6	912	...	88		
Mean.	sw.	3	bcy		29.693	50.7	47.0	76	48.0	7	Cir. & Cir str.	Cum. & Str.

## SATURDAY, 15th.

2.	Calm.	0	bc		29.587	48.8	47.3	90	...	8	Cum.	At Sandy Point.
4.	Calm.	0	e		29.537	47.8	46.3	90	...	10	Cum.&Str.	Temperature by self-registering thermometer, max. 57° 7, min. 46° 2.
6.	Calm.	0	ocp		29.471	47.5	46.3	92	49.5	10	Cum.&Str.	
8.	s.s.w.	1	e		29.574	49.5	48.0	89	...	10	Cum.&Cmst.	
10.	s.s.w.	1	er		29.506	49.5	48.5	93	...	10	Cum.	
Noon.	s.s.w.	1	bc		29.216	52.8	51.0	87	...	7	Cir.	Cum.
2.	s.s.e.	1	bcy		29.183	51.8	50.3	90	...	8	Cir str.	Cum.
4.	s.s.e.	1	bc		29.117	51.3	50.3	93	...	7	Cir.	Cum.
6.	sw'n.	6	bcy		29.052	51.8	50.8	93	48.5	7	Cum.&Cmst.	Str.
8.	w.s.w.	4	bcy		29.071	51.8	48.8	80	...	6	Cir str.	Str.
10.	w.s.w.	1	bcy		29.075	49.5	47.5	86	...	9	...	Str.
Midd.	Calm.	0	bc		29.086	48.0	46.0	86	...	9	Cum.&Str.	
Totals		16			3078	0.1	101.1	1069	...	101		
Mean.	Variable	1	bcy		29.256	50.0	48.4	89	49.0	8	Cir str.	Cum. & Str.

## SUNDAY, 16th.

2.	Calm.	0	bc		29.083	46.3	44.8	90	...	7	Cum str.	At Sandy Point.
4.	w.s.w.	2	bc		29.066	45.8	43.3	82	...	5	Cum.	Temperature by self-registering thermometer, max. 57° 5, min. 41° 0.
6.	sw'w.	3	bc		29.078	47.3	44.8	83	48.2	6	Cir.	Cum.
8.	s.w.	4	oc		29.095	47.8	44.8	79	...	10	Cum.&Nb	
10.	sw'w.	3	ocp		29.099	49.8	45.8	74	...	10	Cum.	
Noon.	w.s.w.	7	ocp'd		29.119	47.8	44.8	79	...	10	Cum.	
2.	w.s.w.	4	ocp		29.129	49.3	45.5	74	...	10	Cum.	
4.	w.	7	bcy		29.129	50.3	45.8	71	...	7	Cir.	Cum.
6.	w.	5	bcy		29.131	50.3	45.3	65	48.0	7	Cir cum.	Cum.&Nb.
8.	w'n.	3	bc		29.132	47.8	44.8	79	...	7	Cir.	Cum.
10.	w.s.w.	1	bc		29.120	45.8	43.8	86	...	6	Cum.	Cum.
Midd.	w.s.w.	3	oc		29.095	44.8	42.8	85	...	10	Cum.	Cum.
Totals		12			1276	93.1	56.3	950	...	95		
Mean.	w.s.w.	3	bcy		29.106	47.8	44.7	79	48.1	8	Cir.	Cum. & Cum str.

## MONDAY, 17TH JANUARY 1876.

Hour.	Wind.		Weather.	State of Sea. 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.W.	1	bc	...	29.037	43.8	42.8	93	...	5	Cir str.	...	At Sandy Point. Temperature by self-registering thermo- meter, max. 56° 5', min. 42° 5'.
4.	N.N.E.	2	bc	...	29.010	44.8	42.8	86	...	9	Cir str.	...	
6.	N.N.W.	0	bc	...	29.001	43.8	42.3	90	48.0	9	Cir.	Cum.	
8.	S.	2	bc	...	28.987	46.3	44.8	90	...	8	Str.	Cum.	
10.	S.W.	2	bc	...	28.982	50.8	48.3	83	...	8	Cir.	Cum.	
Noon.	W.	5	bcq	...	28.996	49.8	44.8	98	...	6	...	Cum.	
2.	W.N.	3	bcq	...	28.996	54.8	47.8	60	...	5	...	Cum.	
4.	W.N.	6	bcq	...	29.007	51.8	46.8	69	...	6	...	Cum.	
6.	W.N.	4	e	...	29.005	48.8	44.5	72	48.0	10	...	Cm.&Str.	
8.	W.	1	e	...	29.003	46.8	43.8	79	...	10	...	Cum.	
10.	N.N.W.	3	e	...	28.980	44.8	43.3	90	...	10	...	Cm.&Str.	
Midt.	N.W.	1	bc	...	28.979	45.3	43.3	86	...	10	Cir str.	Cm.&Str.	
Totals.	...	30	bcq	...	11983	91.6	55.3	966	...	96	Cir. & Cir str.	Cum. & Str.	
Mean.	NW'W.	3		...	28.999	47.6	44.6	80	48.0	8			

## TUESDAY, 18TH.

2.	N.W.	1	bcq	...	28.980	45.8	43.8	86	...	7	...	Cum.	At Elizabeth island. Temperature by self-registering thermo- meter, max. 50°, min. 46°. 7.45 A.M. left Sandy Point. 11 A.M., anchored off Elizabeth island.
4.	W.N.W.	6	eq	...	28.978	45.8	43.8	86	...	19	...	Cum.	
6.	W.	2	bc	...	29.027	46.8	44.5	84	48.0	9	Cir str.	...	
8.	W.	2	e	...	29.053	47.5	44.8	81	...	10	Cir str.	...	
10.	W.N.W.	6	cp	...	29.087	47.3	44.8	83	...	10	...	Cum.	
Noon.	W.	4	cp	...	29.112	47.8	44.8	79	...	10	...	Cum.	
2.	W.S.W.	5	cpqr	...	29.152	47.8	45.3	82	...	10	...	Cm.&Nb.	
4.	W.	3	cp	...	29.203	47.8	45.8	86	...	10	Cir.	Cum.	
6.	W.S.W.	5	cpq	...	29.271	47.3	47.3	86	51.0	10	...	Cm.&Cm.	
8.	S.	3	bcq	...	29.349	48.5	46.8	88	...	8	Cir str.	Cm.&Str.	
10.	S.S.W.	3	bc	...	29.436	47.8	46.3	90	...	8	Cir.	Cm.&Str.	
Midt.	S.S.W.	2	bc	...	29.521	46.8	45.8	93	...	6	Cir.	Cm.&Str.	
Totals.	...	42	cpq	...	2169	89.0	63.8	64	90.0	108	Cir. & Cir str.	Cum., Str., & Cum str.	
Mean.	W'S'S.	4		...	29.181	47.4	45.3	85	49.5	9			

## WEDNESDAY, 19TH.

2.	S.S.W.	3	bc	...	29.563	46.8	45.8	93	...	2	...	Cum.	At Elizabeth island. Temperature by self-registering thermo- meter, max. 57° 5, min. 44° 5.	
4.	W.S.W.	2	bc	...	29.611	45.8	44.8	93	...	3	Cir.	Cum.		
6.	W.	2	bc	...	29.695	47.8	46.3	90	49.0	2	Cir.	Str.		
8.	W.	1	bc	...	29.719	49.3	46.8	83	...	1	...	Cum.		
10.	S.S.W.	3	bc	...	29.718	51.0	48.5	83	...	4	Cir.	Cum.		
Noon.	W.S.W.	3	bc	...	29.711	52.8	49.0	75	...	3	...	Cum.		
2.	W.	4	bc	...	29.711	55.3	51.3	75	...	4	Cir.	Cum.		
4.	W.	2	bc	...	29.679	54.3	49.8	72	...	7	Cir.	Cum.		
6.	W.S.W.	5	bcq	...	29.685	51.3	47.8	77	49.2	9	Str.	Cum.		
8.	W.S.W.	6	bc	...	29.686	49.8	46.8	80	...	9	...	Cum.		
10.	W.S.W.	3	ocqp	...	29.680	47.3	46.3	93	...	10	...	Cm.&Nb.		
Midt.	W.S.W.	6	ocqp	...	29.671	47.5	46.0	90	...	10	...	Cum.		
<hr/>														
Totals.		40	bc & cpq	...	8129	119.9	89.2	1004	...	64	Cir.	Cum.		
<hr/>														
Mean.		W.S.W.	3	...	29.677	49.9	47.4	84	49.1	5				

## THURSDAY, 20th JANUARY 1876.

Hour	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.	4	cg	...	29.658	47.3	46.3	93	...	10	...	Cum str.	At noon, lat. 52° 22' s. long. 68° 55' w. Temperature by self-registering thermo- meter, max. 55° 7', min. 45° 5'. 5 A.M., left Elizabeth island. Sp. gr. 1.02296.
4.	w.	2	bc	...	29.741	46.8	45.8	93	...	7	...	Cir.	
6.	w.s.w.	5	bc	...	29.644	48.3	46.3	86	49.0	8	Cir cum.	Cum & Str.	
8.	w.s.	3	bc	...	29.641	49.8	47.8	86	50.5	7	Cir str.	Cum & Str.	
10.	w.	5	bc	...	29.626	52.8	50.0	81	...	9	Cir cum.	Cum.	
Noon.	sw <sup>1</sup> w.	6	bc	...	29.602	53.8	50.8	80	51.2	9	Cir cum.	Cum.	
2.	w.	4	bc	2	29.543	54.3	50.8	77	50.5	5	Cir cum.	...	
4.	w.s.w.	5	bc	3	29.509	54.3	50.5	75	52.0	2	Cir str.	...	
6.	s.w.	2	bc	...	29.526	54.3	50.3	74	48.5	3	Cir str.	...	
8.	s.w.	4	bc	...	29.535	49.8	46.8	80	48.0	0	Cir str.	...	
10.	s.s.w.	5	bc	...	29.553	48.5	45.3	79	48.0	7	...	Str. & Cum.	
Midl.	s.s.w.	5	bc	...	29.541	46.8	44.8	86	48.0	4	Cir str.	Str. & Cum.	
Totals.	...	50	bc	5	7119	6.8	95.5	990	85.7	80	Cir cum. & Cir str.	Cum. & Str.	
Mean.	w.s.w.	4		2	29.593	50.6	48.0	82	49.5	7			

## FRIDAY, 21st.

2.	s.w.	5	bc	...	29.510	46.3	44.8	90	48.0	2	Cir str.	...	At noon, lat. 51° 31' s. long. 65° 24' w. Temperature by self-registering thermo- meter, max. 55°, min. 45° 5'. Current, N. 15° E. 11'. A few stormy petrel. Sp. gr. 1.02469.
4.	s.s.e.	2	bc	...	29.488	46.8	46.3	97	48.0	4	Cir str.	Str.	
6.	e.s.	2	bc	...	29.534	48.5	46.8	88	48.0	3	Cir str.	Cum.	
8.	Cal.	0	bc	...	29.570	48.8	46.8	86	47.7	6	Cir.	Cum.	
10.	w.s.w.	1	bc	...	29.576	48.8	46.8	86	48.2	8	...	Cum.	
Noon.	w.s.w.	2	bc	...	29.579	49.8	46.8	80	48.7	6	Cir.	Cum. & Str.	
2.	s.w.	3	bc	...	29.595	49.8	46.8	80	49.5	7	...	Cum.	
4.	s.w.	2	bc	...	29.584	50.8	47.8	80	49.5	3	Cir.	Cum.	
6.	w.s.	1	bc	...	29.593	52.3	48.8	77	50.0	6	Cir cum. & Str.	Cum.	
8.	w.s.w.	1	bc	...	29.586	49.3	46.8	83	49.0	6	Cir.	Cum.	
10.	w.s.w.	0	bc	...	29.591	47.8	45.8	86	48.7	7	Str.	Cum.	
Midl.	w.s.w.	1	bc	...	29.591	47.3	45.8	90	48.2	3	Str.	...	
Totals.	...	20	bc	...	6797	586.3	80.1	1023	103.5	61	Cir str.	Cum. & Str.	
Mean.	s.w.	2		...	29.566	48.9	46.7	85	48.6	5			

## SATURDAY, 22d.

2.	w.s.w.	1	bc	1	29.557	46.8	45.8	93	48.0	1	Cum.	...	At noon, lat. 51° 15' s. long. 61° 35' w. Temperature by self-registering thermo- meter, max. 51°, min. 46°. Sp. gr. 1.02486.
4.	s.	2	c	...	29.524	46.8	45.8	93	48.0	10	Cum. & Str.	...	
6.	N <sup>1</sup> w.	2	od	3	29.477	47.5	46.8	95	...	10	...	Str.	
8.	N <sup>1</sup> e.	4	od	4	29.433	48.3	47.8	97	49.0	10	...	Str.	
10.	sw <sup>1</sup> w.	3	cp	...	29.382	50.3	50.3	100	49.8	10	...	Str.	
Noon.	sw <sup>1</sup> s.	4	cp	...	29.368	50.3	50.3	100	49.8	10	...	Str.	
2.	sw <sup>1</sup> w.	5	cp	...	29.329	50.3	50.3	100	49.5	10	Str. & N.b.	...	
4.	sw <sup>1</sup> w.	3	cp	...	29.293	49.8	49.3	97	49.0	10	Str. & N.b.	...	
6.	w <sup>1</sup> s. N.	5	cpr	...	29.248	50.8	50.8	100	49.0	10	Cum. & Cumst	...	
8.	...	...	...	...	29.227	50.0	49.8	98	...	...	...	...	
10.	w <sup>1</sup> s.	4	bc	...	29.218	50.0	48.3	88	49.0	4	...	Cum.	
Midl.	sw <sup>1</sup> w	5	bc	...	29.198	49.8	47.8	86	49.0	2	...	Cum.	
Totals.	...	38	cpr	8	4254	110.7	103.1	1147	90.1	87	...	Cum., Str., & Nimb.	
Mean.	s.w.	3		3	29.354	49.2	48.6	96	49.0	8			

SUNDAY, 23D JANUARY 1876.

Hour.	Wind.		Weather	State of Sea 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	swb $\frac{1}{2}$ w.	5	bc	...	29.187	48.8	47.8	93	49.7	5	...	Cum.	At noon, lat. 51° 36' s, long. 58° 32' w. Temperature by self-registering thermo- meter, max. 50° min. 47°.
4.	w $\frac{1}{2}$ s.	4	bc	...	29.181	48.3	47.3	93	48.5	3	...	Cum.&Str.	
6.	sw $\frac{1}{2}$ s.	6	bcq	...	29.198	48.3	46.8	90	48.5	5	Cir.	Cum.&Cumst.	
8.	ssw $\frac{1}{2}$ w.	5	cqp	...	29.194	47.3	45.8	90	48.0	10	...	Cum.&Cumst.	
10.	ssw $\frac{1}{2}$ w.	5	bcqp	...	29.190	47.5	46.3	92	...	8	Cir str.	Cum.	Sp. gr. 1.02483. 3 p.m., anchored in Stanley harbour, Falkland islands.
Noon.	ssw $\frac{1}{2}$ w.	5	bcq	...	29.179	47.3	46.0	91	...	8	Str.	Cum.	
2.	sw $\frac{1}{2}$ s.	4	cp	...	29.222	48.3	46.3	86	49.0	10	Str.	Cum.	
4.	sw $\frac{1}{2}$ s.	3	cp	...	29.258	47.8	45.8	86	...	10	Str.	Cum.	
6.	sb $\frac{1}{2}$ SE.	2	e	...	29.309	46.8	44.8	86	50.5	10	...	Cum.&Str.	
8.	sb $\frac{1}{2}$ SE.	2	oe	...	29.343	44.8	43.0	86	...	10	...	Cum.&Str.	
10.	sb $\frac{1}{2}$ SE.	1	oe	...	29.367	43.5	42.8	94	...	10	...	Cum.&Str.	
Midt.	Calm.	0	oe	...	29.388	43.8	42.5	90	...	10	...	Cum.&Str.	
Totals.	...	42	bcqp	...	3016	82.5	65.2	1077	54.2	99	Cir. & Str.	Cum., Str., & Cum str.	
Mean.	ssw $\frac{1}{2}$ w.	3		...	29.251	46.9	45.4	90	49.0	8			

MONDAY, 24TH.

2.	Calm.	0	cp	...	29.390	47.8	46.8	93	...	10	...	Str.	At Port Stanley. Temperature by self-registering thermo- meter, max. 53°, min. 41° 5.
4.	Calm.	0	cp	...	29.399	47.8	47.8	100	...	10	...	Str.	
6.	Calm.	0	e	...	29.434	44.3	43.8	96	50.0	10	...	Cum.	
8.	w $\frac{1}{2}$ s.	0	e	...	29.449	47.5	46.0	90	...	10	...	Cum.	
10.	swb $\frac{1}{2}$ w.	1	cp	...	29.451	49.3	47.3	86	...	10	...	Cum.	
Noon.	sw $\frac{1}{2}$ s.	2	bcq	...	29.461	48.5	47.8	95	...	8	...	Cum.	
2.	sb $\frac{1}{2}$ s.	1	cqp	...	29.435	48.5	47.8	95	...	10	...	Cum.	
4.	swb $\frac{1}{2}$ w.	1	bcq	...	29.444	49.3	47.8	90	...	8	...	Cum.	
6.	swb $\frac{1}{2}$ w.	4	bcq	...	29.462	49.8	47.8	86	50.7	8	...	Cum.	
8.	swb $\frac{1}{2}$ w.	2	bcqp	...	29.456	46.3	44.8	90	...	8	Cir cum.	Cum.	
10.	swb $\frac{1}{2}$ w.	1	bcq	...	29.532	45.3	43.8	89	...	8	...	Cum.	
Midt.	swb $\frac{1}{2}$ w.	2	bc	...	29.587	44.3	42.8	88	...	6	...	Cum.	
Totals.	...	17	bcqp	...	5590	88.7	74.3	1098	...	106	Cir cum.	Cum. & Str.	
Mean.	swb $\frac{1}{2}$ w.	1		...	29.458	47.4	46.2	91	50.3	9			

TUESDAY, 25TH.

2.	swb $\frac{1}{2}$ w.	1	bc	...	29.601	41.8	40.8	92	...	2	...	Cum.	At Port Stanley. Temperature by self-registering thermo- meter, max. 56° min. 39° 5.
4.	sw $\frac{1}{2}$ w.	2	bc	...	29.595	42.3	41.3	92	...	6	...	Cum.&Str.	
6.	wb $\frac{1}{2}$ N.	1	bc	...	29.596	45.3	44.5	94	50.2	7	...	Cum.	
8.	wb $\frac{1}{2}$ N.	2	bc	...	29.596	51.3	47.8	77	...	7	...	Cum.	
10.	w $\frac{1}{2}$ s.	2	bc	...	29.590	52.8	48.5	74	...	6	...	Cum.	
Noon.	w $\frac{1}{2}$ s.	3	bcq	...	29.592	51.8	48.3	77	...	10	...	Cum.&Str.	
2.	swb $\frac{1}{2}$ w.	2	bcph	...	29.612	48.8	47.8	93	...	8	...	Cum.	
4.	sw $\frac{1}{2}$ w.	2	bc	...	29.625	49.8	46.8	80	...	7	...	Cum.&Str.	
6.	sb $\frac{1}{2}$ E.	1	bc	...	29.666	48.8	46.8	86	50.7	8	Cir cum.	Cum.	
8.	Calm.	0	bc	...	29.691	47.3	45.8	89	...	8	Cir.	Cum str.	
10.	Calm.	0	bc	...	29.730	44.3	42.8	88	...	5	...	Cum.	
Midt.	Calm.	0	bc	...	29.765	43.3	42.8	96	...	2	...	Cum.	
Totals.	...	16	bc	...	7659	87.6	64.3	1058	...	76	Cir cum.	Cum. & Str.	
Mean.	w $\frac{1}{2}$ s w.	1		...	29.638	47.3	45.4	86	50.5	6			

## WEDNESDAY, 26TH JANUARY 1876.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32 in Sea-Level	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Caln.	0	bc	...	29.770	41.5	40.8	94	...	3	Cir.	Cum.	At Port Stanley. Temperature by self-registering thermo- meter, max. 54.7, min. 38.0.
4.	Caln.	0	bc	...	29.771	40.0	39.5	96	...	2	...	Cum.	
6.	Caln.	0	b	...	29.783	41.3	40.8	96	49.5	0	...	...	
8.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.788	49.0	46.8	85	...	6	Cir.	Cum.	
10.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bc	...	29.767	53.8	50.8	80	...	6	Cir.	Cum.	
Noon.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	bc	...	29.759	52.3	49.3	80	...	6	Cir.	Cm.&Str.	
2.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.747	50.8	48.8	86	...	6	Cir.	Cm.&Str.	
4.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.722	49.8	47.8	86	...	5	Cir.	Cum.	
6.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	b	...	29.703	48.8	47.5	91	51.2	8	...	Cm.&Str.	
8.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.693	47.8	46.8	93	...	9	Cir.	Cum.	
10.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	c	...	29.640	47.8	46.8	93	...	10	...	Cum.	
Midn.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	5	cq	...	29.628	48.3	47.3	93	...	10	...	Cum.	
Totals.	...	25		bc	...	8771	91.2	73.0	113	100.7	71		Cir. Cm. & Str.
Mean.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2			...	29.731	47.6	46.1	89	50.3	6		

## THURSDAY, 27TH.

2.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	cq	...	29.594	48.3	47.8	97	...	10	...	Cum.	At Port Stanley. Temperature by self-registering thermo- meter, max. 57.5, min. 46.5.
4.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	5	cq	...	29.554	48.3	47.8	97	...	10	...	Cum.	
6.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	3	cqd	...	29.533	49.5	49.5	100	50.7	10	...	Cum.	
8.	N <sup>W</sup> .	4	cqd	...	29.535	49.8	49.8	100	...	10	...	Cum.	
10.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	cqd	...	29.527	50.0	50.0	100	...	10	...	Cum.	
Noon.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	3	cqd	...	29.525	50.5	50.0	97	...	10	...	Cum.	
2.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	c	...	29.533	52.3	51.8	97	...	10	...	Cum.	
4.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	b	...	29.551	55.3	54.8	97	...	4	...	Cum.	
6.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	b	...	29.572	54.8	53.8	93	51.5	3	Cir.	Cum.	
8.	Caln.	0	bc	...	29.617	51.5	50.8	95	...	3	Cir str.	...	
10.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bef	...	29.642	47.5	46.8	95	...	10	...	Cum.	
Midn.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	1	bef	...	29.647	46.0	46.0	100	...	8	...	Cum.	
Totals.	...	24		bcqd	...	6850	3.8	118.9	1168	2.2	98		Cir str. Cum.
Mean.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2			...	29.569	50.3	49.9	97	51.1	8		

## FRIDAY, 28TH.

2.	NNW <sup>1</sup> / <sub>2</sub> W.	1	of	...	29.655	44.8	44.8	100	...	10	...	Cum.	At Port Stanley. Temperature by self-registering thermo- meter, max. 59.5, min. 43.5.
4.	NW <sup>1</sup> / <sub>2</sub> W.	1	cum	...	29.650	46.8	46.8	100	...	10	...	Cum.	
6.	NNW <sup>1</sup> / <sub>2</sub> W.	1	b	...	29.667	47.8	47.8	100	51.0	5	Cir.	Cum.	
8.	N <sup>W</sup> .	1	b	...	29.671	53.5	50.8	82	...	5	Cir.	Cum.	
10.	N <sup>W</sup> .	3	b	...	29.673	50.5	54.5	87	...	6	Cir.	Cum.	
Noon.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	b	...	29.667	50.8	53.8	81	...	3	Cir.	Cm.&Cm	
2.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	3	b	...	29.620	57.3	54.8	84	...	5	...	Cum str.	
4.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	4	b	...	29.624	55.8	53.8	87	...	4	...	Cum.	
6.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	b	...	29.627	55.3	52.8	84	52.0	6	Cir.	Cum.	
8.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	4	b	...	29.609	52.8	51.3	90	...	4	Cir.	Cum.	
10.	N <sup>W</sup> E <sup>1</sup> / <sub>2</sub> E.	2	cq	...	29.618	52.5	50.8	89	...	10	...	Cum.	
Midn.	N <sup>W</sup> .	5	cq	...	29.643	51.5	50.5	93	...	10	...	Cum.	
Totals.	...	29		bcq	...	7724	31.4	12.5	1077	...	76		Cir. Cum.
Mean.	N.	2			...	29.644	52.6	51.0	90	51.5	6		

## SATURDAY, 29TH JANUARY 1876.

Hour	Wind.		Weather.	State of Sea. 0 to 3.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	SW by W.	3	bcy	...	29.555	51.8	50.8	93	...	9	...	Cum.	At Port Stanley. Temperature by self-registering thermometer, max. 58°, min. 50°.
4.	SW by W.	4	bcy	...	29.500	51.8	50.8	93	...	9	...	Cum.	
6.	N.E.	12	oc	...	29.631	51.8	51.3	97	50.7	10	...	Cm. & Str.	
8.	SW by W.	1	c	...	29.650	54.3	53.3	93	...	10	...	Cm. & Cm. Str.	
10.	N.E.	12	c	...	29.656	54.8	51.3	97	...	9	...	Str. & Cm.	
Noon.	N.E.	12	c	...	29.661	54.8	53.8	93	...	10	...	Cum.	
2.	N.E.	1	bc	...	29.657	57.5	55.0	84	...	8	Cir.	Cum. & Cm.	
4.	N.E.	1	c	...	29.654	55.8	54.0	88	...	9	...	Cm. & Str.	
6.	N.E.	2	cm	...	29.631	53.8	52.3	89	51.2	10	...	Cum.	
8.	N.E.	1	ed	...	29.630	51.3	50.3	93	...	10	...	Cum.	
10.	N.E.	1	ed	...	29.625	50.8	50.3	96	...	10	...	Cum.	
Midt.	N.E.	1	ed	...	29.628	49.8	49.8	100	...	10	...	Cum.	
Totals.		21			7508	58.3	26.0	1116	...	111			
Mean.	N.E.	2	edm		29.633	53.2	52.2	93	50.9	9	Cir.	Cum. & Str.	

## SUNDAY, 30TH.

2.	N.E.	1	oel	...	29.614	49.8	49.8	100	...	10	...	Cum.	At Port Stanley. Temperature by self-registering thermometer, max. 51.5°, min. 45.5°.
4.	N.E.	1	oel	...	29.569	50.3	50.2	100	...	10	...	Cum.	
6.	N.E.	1	oor	...	29.542	50.8	50.5	98	53.0	10	...	Cum.	
8.	N.E.	1	oor	...	29.532	50.8	50.8	100	...	10	...	Cum.	
10.	N.E.	2	oor	...	29.510	50.3	50.3	100	...	10	...	Cum.	
Noon.	N.E.	1	oelf	...	29.485	50.3	50.3	100	...	10	...	Cum.	
2.	N.E.	1	oor	...	29.451	49.8	49.3	96	...	10	...	Cum.	
4.	N.E.	12	oor	...	29.389	48.8	48.8	100	...	10	...	Cum.	
6.	N.E.	3	oor	...	29.310	48.5	48.5	100	53.0	10	...	Cum.	
8.	E.S.	12	oor	...	29.229	47.8	46.8	93	...	10	...	Cum.	
10.	S.E.	3	oor	...	29.174	47.8	47.8	100	...	10	...	Cum.	
Midt.	S.E.	2	oor	...	29.103	46.8	46.8	100	...	10	...	Cum.	
Totals.		20			4917	111.8	110.0	1187	...	...			
Mean.	E.N.E.	2	oor		29.410	49.3	49.2	90	53.0	10		Cum.	

## MONDAY, 31ST.

2.	SW by W.	2	oey	...	29.072	46.8	46.8	100	...	10	...	Cum.	At Port Stanley. Temperature by self-registering thermometer, max. 52.5°, min. 45.9°.
4.	SW by W.	5	oey	...	29.043	45.8	44.8	93	...	10	...	Cum.	
6.	SW by W.	9	oey	...	29.111	44.8	44.5	98	51.7	10	...	Nimb.	
8.	SW by W.	9	oey	...	29.187	44.3	43.3	93	...	10	...	Nimb.	
10.	SW by W.	8	oey	...	29.260	45.8	44.8	93	...	10	...	Cum.	
Noon.	SW by W.	9	oey	...	29.295	47.8	46.5	91	...	10	...	Cum.	
2.	SW by W.	7	bcy	...	29.358	50.8	48.3	83	...	7	...	Cum.	
4.	SW by W.	6	bcy	...	29.402	49.8	47.3	83	...	8	...	Cum.	
6.	SW by W.	4	bcy	...	29.454	48.8	46.8	84	52.0	8	...	Cum.	
8.	SW by W.	3	oey	...	29.487	47.0	46.3	95	...	10	...	Cum.	
10.	W.S.	4	bcy	...	29.528	46.0	45.5	96	...	2	...	Str.	
Midt.	W.S.	1	oey	...	29.529	45.0	44.8	99	...	10	...	Cum.	
Totals.		79			3726	82.7	69.7	39	...	105			
Mean.	SW by W.	6	oey		29.310	46.9	45.8	92	51.9	9		Cum. & Nimb.	

## TUESDAY, 1st FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-level.	Thermometer.				Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	w <sup>1</sup> s.	5	bcpp	...	29.585	44.3	44.3	100	...	9	...	Cum str.	At Port Louis. Temperature by self-registering thermo- meter, max. 57°, min. 42°. 6 A.M., left Stanley harbour. 9 A.M., anchored in Port Louis.
4.	w <sup>1</sup> s.	2	bcpp	...	29.610	43.8	42.8	92	...	5	...	Cum str.	
6.	sw <sup>1</sup> w <sup>1</sup> w	4	bc	...	29.644	44.8	43.8	92	...	8	...	Cm.&Cumst	
8.	w <sup>1</sup> N.	5	bcq	...	29.661	46.8	44.8	86	...	6	...	Cum.	
10.	w <sup>1</sup> N.	4	bc	...	29.667	51.8	49.0	81	...	8	...	Cum.	
Noon.	w <sup>1</sup> N.	3	bc	...	29.657	53.8	49.8	74	...	8	...	Cum.	
2.	w <sup>1</sup> s <sup>1</sup> N.	3	bcpp	...	29.654	53.8	51.8	86	...	8	...	Cum.	
4.	w <sup>1</sup> s <sup>1</sup> N.	3	bcpp	...	29.629	54.3	51.8	83	...	9	...	Cum.	
6.	w <sup>1</sup> s <sup>1</sup> N.	3	bcpp	...	29.629	53.8	50.8	80	52.2	8	Cir.	Cum.	
8.	w <sup>1</sup> s <sup>1</sup> N.	3	bc	...	29.648	51.8	49.8	86	...	7	Str.	Cum.	
10.	w <sup>1</sup> s <sup>1</sup> N.	3	bc	...	29.647	49.5	47.8	88	...	8	Str.	Cum.	
Midt.	sw <sup>1</sup> w <sup>1</sup> w	2	c	...	29.645	49.5	48.8	95	...	10	...	Cum.	
Totals.	...	38	bcpp	...	7676	118.0	95.3	104.3	...	94	Cir. & Str.	Cum. & Cum str.	
Mean.	w <sup>1</sup> N.	3		...	29.640	49.8	47.9	87	52.2	8			

## WEDNESDAY, 2d.

2.	sw <sup>1</sup> w <sup>1</sup> w	2	bcq	...	29.588	50.3	49.5	94	...	8	...	Cum.	At Port Louis. Temperature by self-registering thermo- meter, max. 51°, min. 47°.
4.	sw <sup>1</sup> w	3	bcq	...	29.587	50.3	49.3	93	...	8	...	Cum.	
6.	sw <sup>1</sup> w <sup>1</sup> w	1	oc	...	29.598	50.3	49.8	96	52.0	10	...	Cum str.	
8.	w <sup>1</sup> N.	2	oc	...	29.560	49.8	49.3	96	...	10	...	Cm.St.&Nb	
10.	w <sup>1</sup> N.	2	oc	...	29.548	47.3	46.8	97	...	10	...	Cum str.	
Noon.	sw <sup>1</sup> w <sup>1</sup> w	5	oc	...	29.593	45.8	44.8	93	...	10	...	Cum str.	
2.	sw <sup>1</sup> w <sup>1</sup> w	3	bcq	...	29.629	47.5	45.0	83	...	9	...	Cum.	
4.	sw <sup>1</sup> s.	6	bc	...	29.634	49.8	46.5	78	...	6	...	Cum.	
6.	sw <sup>1</sup> s.	5	bcq	...	29.691	48.3	45.8	83	52.0	8	...	Cum.	
8.	sw <sup>1</sup> s.	2	bc	...	29.729	46.3	44.3	86	...	4	...	Cum.	
10.	w <sup>1</sup> N.	3	bc	...	29.735	43.8	43.3	96	...	2	...	Cum.	
Midt.	w <sup>1</sup> s <sup>1</sup> N.	1	b	...	29.726	41.8	41.3	96	...	0	...	...	
Totals.	...	35	bcpp	...	7668	91.3	75.7	109.1	...	85		Cum. & Cum str.	
Mean.	w <sup>1</sup> s.	3		...	29.639	47.6	46.3	91	52.0	7			

## THURSDAY, 3d.

2.	w <sup>1</sup> s <sup>1</sup> N.	1	bc	...	29.707	42.8	41.8	92	...	5	...	Cum.	At Port Louis. Temperature by self-registering thermo- meter, max. 54°, min. 40°.
4.	sw <sup>1</sup> w <sup>1</sup> w	3	bc	...	29.654	44.8	43.3	89	...	5	...	Cum.	
6.	sw <sup>1</sup> w	3	cm	...	29.600	46.8	45.8	93	51.2	10	...	Cum.	
8.	sw <sup>1</sup> w <sup>1</sup> w.	4	ocppd	...	29.561	48.8	47.8	93	...	10	...	Cum str.	
10.	sw <sup>1</sup> w <sup>1</sup> w.	4	bcq	...	29.536	51.3	49.8	90	...	9	...	Cum str.	
Noon.	sw <sup>1</sup> w <sup>1</sup> w.	8	bcq	...	29.446	52.3	49.8	83	...	9	...	Cum str.	
2.	sw <sup>1</sup> w <sup>1</sup> w.	4	er	...	29.359	50.8	50.8	100	...	10	...	Str.&Nb	
4.	sw <sup>1</sup> w <sup>1</sup> w	3	ocp	...	29.308	50.8	50.8	100	...	10	...	Cum str.	
6.	w <sup>1</sup> N.	4	bc	...	29.307	51.8	50.0	87	51.2	7	...	Cum.	
8.	sw <sup>1</sup> s.	3	oc	...	29.363	47.8	46.8	93	...	10	Cir str.	Cum str.	
10.	sw <sup>1</sup> w <sup>1</sup> w.	2	bc	...	29.406	45.8	44.8	93	...	7	...	Cum str.	
Midt.	w <sup>1</sup> s.	1	oc	...	29.432	45.3	44.3	92	...	10	...	Cum.	
Totals.	...	40	ocp	...	5679	99.1	85.8	110.5	...	102	Cir str.	Cum. & Cum str.	
Mean.	w. N. W.	3		...	29.473	48.3	47.1	92	51.2	9			

## FRIDAY, 4TH FEBRUARY 1876.

Hour.	Wind		Weather.	State of Sea, 0 to 5.	Barometer re- directed to 32° and Sea Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower	
2.	w <sup>by</sup> s.w.	2	bc	...	29.434	44.8	44.3	96	...	4	...	Cm.&Str.	...	In Berkeley sound.
4.	w.s.	1	bc	...	29.421	44.8	44.8	100	...	3	...	Cm.&Str.	...	Temperature by self-registering thermo-
6.	xxw <sup>by</sup> w.	3	bc	...	29.395	48.5	48.3	99	49.7	8	...	Cm.&Str.	...	meter, max. 52°, min. 43°.5.
8.	w <sup>by</sup> s.w.	4	cm	...	29.355	49.0	47.8	92	...	9	...	Cm.&Str.	...	
10.	w <sup>by</sup> s.w.	5	cpq	...	29.287	50.8	49.8	93	49.7	10	...	Cum.	...	At 4 A.M., left Port Louis, and after
Noon.	w <sup>by</sup> s.w.	8	op	...	29.249	48.8	47.8	93	39.5	10	...	Cum str.	...	swinging ship in Berkeley sound,
2.	w <sup>by</sup> s.w.	8	op	...	29.186	48.3	48.3	100	49.7	10	...	Cm.st.&Nb	...	returned to Port Stanley.
4.	w.s.	5	cpq	...	29.167	47.3	46.8	97	...	9	...	Cum str.	...	
6.	sw <sup>by</sup> w.	6	bcq	...	29.134	48.8	47.8	93	49.7	6	...	Cm.&Nb	...	
8.	w.s.	3	bc	...	29.118	47.8	46.8	93	...	6	...	Cum str.	...	
10.	w.s.	5	bcq	...	29.110	47.8	46.8	93	...	4	...	Cum str.	...	
Midt.	w <sup>by</sup> s.w.	2	bc	...	29.095	45.3	44.8	96	...	3	...	Cum str.	...	
Totals.	...	52	bcq	...	29.51	92.0	84.1	65	...	33	82	...	Cum., Str., Cum str., & Nimb.	
Mean.	w <sup>by</sup> s.w.	4	...	...	29.246	47.7	47.0	95	49.6	7	...	...	...	

## SATURDAY, 5TH

2.	w <sup>by</sup> s.w.	2	bc	...	29.056	44.8	44.3	96	...	0	...	...	...	At Port Stanley.
4.	w <sup>by</sup> s.w.	1	bc	...	29.013	44.3	43.8	98	...	4	...	Cm.&Str.	...	Temperature by self-registering thermo-
6.	w <sup>by</sup> s.w.	1	cm	...	28.946	45.3	44.8	96	49.0	9	...	Str.	...	meter, max. 49°, min. 42°.5.
8.	w <sup>by</sup> s.w.	1	cm	...	28.912	47.0	46.3	95	...	10	...	Str.	...	8.45 A.M., wind shifted to s.s.w., with
10.	ssw <sup>by</sup> w.	1	cm	...	28.923	46.5	46.0	97	...	10	...	Str.	...	rain.
Noon.	ssw <sup>by</sup> w.	4	bcq	...	28.969	47.3	45.8	90	...	7	...	Cir str.	...	
2.	sw.s.	6	bcq	...	29.011	47.8	46.3	90	...	8	...	Cir.	...	
4.	sw <sup>by</sup> w.	4	bcq	...	29.053	46.8	45.3	89	...	7	...	Cir.	...	
6.	sw <sup>by</sup> w.	7	bcq	...	29.118	46.8	44.8	86	49.2	9	...	Cum.	...	
8.	sw.s.	4	bcq	...	29.212	45.3	43.8	89	...	8	...	Cum.	...	
10.	sw <sup>by</sup> w.	6	bcq	...	29.251	45.0	43.8	91	...	8	...	Cum.	...	
Midt.	sw <sup>by</sup> w.	3	bcq	...	29.281	44.0	43.8	98	...	8	...	Cum.	...	
Totals.	...	40	bcq	...	745	70.9	58.8	33	...	88	...	Cir. & Cir str.	Cum. & Str.	
Mean.	w.s.w.	3	...	...	29.062	45.9	44.9	93	49.1	7	...	...	...	

## SUNDAY, 6TH.

2.	sw <sup>by</sup> w.	7	bcq	...	29.338	43.8	41.8	84	...	9	...	Cm Str & Nb	...	At Port Stanley.
4.	sw <sup>by</sup> w.	3	bcq	...	29.337	42.3	40.3	85	...	5	...	Cm.&Str.	...	Temperature by self-registering thermo-
6.	sw <sup>by</sup> w.	4	bcq	...	29.445	43.5	41.3	83	49.0	4	...	Cum.	...	meter, max. 54°.5, min. 41°.7.
8.	w.s.	2	bc	...	29.468	45.8	42.8	79	...	5	...	Cir.	...	
10.	w.s.	3	bc	...	29.452	50.8	45.3	65	...	5	...	Cir str.	...	4 P.M., left Stanley Harbour.
Noon.	w <sup>by</sup> s.w.	2	bc	...	29.421	51.8	46.3	66	...	7	...	Str.	...	
2.	xxw <sup>by</sup> w.	3	bcq	...	29.347	51.5	45.5	80	...	8	...	Cm.&Str.	...	
4.	xxw <sup>by</sup> w.	5	bcq	...	29.243	52.3	49.5	81	...	8	...	Cm.&Str.	...	
6.	N.E.	9	bcq	...	29.145	50.5	49.5	93	49.5	9	...	Cm.&Str.	...	
8.	sw <sup>by</sup> w.	5	cd	4	29.095	49.8	49.8	100	49.0	9	...	Cum.	...	
10.	sw <sup>by</sup> w.	7	bcqm	4	28.966	48.8	48.3	97	49.7	6	...	Cum str.	...	
Midt.	sw <sup>by</sup> w.	5	bcqm	4	28.948	49.8	48.3	90	49.7	7	...	Cm.st.&Nb	...	
Totals.	...	55	bcqm	12	3235	160.7	71.7	1003	...	19	82	Cir. & Str.	Cum. & Str. & Nimb.	
Mean.	w.s.w.	5	...	4	29.269	48.4	46.0	84	49.4	7	...	...	...	

## MONDAY, 7TH FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Wet Bulb.				Upper.	Lower.	
2.	N.W.	6	bc	3	28.970	49.5	48.8	95	46.5	9	...	Cm.&Cmst.	...	At noon, lat. 50° 41' S. long. 56° 20' W. Temperature by self-registering thermometer, max. 51°, min. 46° 5'. Current, N. 39° E. 4'. Shortly after 1 A.M., the wind hauled to W. and fell light. At 2 A.M., it was calm. At 2.30 A.M., barometer began again to fall, and wind backed to S.W. Albatross seen. Sp. gr. 1.02517.
4.	N.W.S.	2	b	...	28.956	47.8	46.8	93	46.5	6	...	Cum.	...	
6.	N.W.S.	1	cp	...	28.967	48.3	47.8	96	46.0	10	...	Str.&Cm.	...	
8.	W.N.W.	3	bc	...	29.000	48.3	47.5	95	46.0	7	...	Cir str.	...	
10.	W.N.W.	4	bc	...	29.018	48.3	47.5	95	46.0	5	...	Cir.	Cm.&Str.	
Noon.	W.N.S.	3	b	...	29.091	48.8	47.8	93	46.0	2	...	Cum.	...	
2.	W.N.S.	5	bc	4	29.146	48.8	47.8	93	46.0	3	...	Str.	Cum.	
4.	W.	3	cp	...	29.225	48.3	47.3	93	46.2	10	...	Cir str.	Cum.	
6.	W.S.	4	bc	...	29.312	48.8	45.8	79	46.2	2	...	Cir.	...	
8.	W.	4	bc	4	29.412	46.8	44.8	86	46.0	3	...	Cum.	...	
10.	W.	3	bc	...	29.463	46.3	44.8	90	46.0	2	...	Cum.	...	
Midt.	N.W.W.	3	b	...	29.545	46.3	45.3	93	46.5	0	...	...	...	
Totals	...	35	bc	11	2105	96.3	82.0	1101	19	59	...	Cir., Str., & Cir str.	Cum. & Str.	
Mean.	W.N.W.	3		3	29.175	48.0	46.8	92	46.2	5				

## TUESDAY, 8TH.

2.	N.W.W.	5	b	4	29.534	46.8	45.8	93	47.0	0	...	...	...	At noon, lat. 48° 37' S. long. 55° 17' W. Temperature by self-registering thermometer, max. 51° 5', min. 44° 8'. Current, N. 31° E. 15'. Sp. gr. 1.02525.
4.	N.W.W.	3	b	3	29.574	46.8	45.8	93	47.0	0	...	...	...	
6.	N.W.S.	4	bc	4	29.622	47.8	46.8	93	47.0	2	...	Cr.&Cm	...	
8.	N.N.W.	5	bc	3	29.619	47.8	47.3	96	...	6	...	Str.	...	
10.	N.W.	4	c	4	29.542	49.8	48.3	90	46.7	9	...	Cm.&Str.	...	
Noon.	N.W.	5	c	4	29.510	50.3	48.8	90	46.7	10	...	Cum.	...	
2.	N.W.	4	c	4	29.485	50.3	47.8	83	46.5	10	...	Cum.	...	
4.	N.W.	7	cp	...	29.399	50.8	48.8	86	46.5	10	...	Cum.	...	
6.	N.W.S.	6	cm	1	29.357	50.0	49.5	96	46.7	10	...	Str.	...	
8.	N.W.	6	c	4	29.323	49.8	48.8	93	47.0	10	...	Cum.	...	
10.	N.W.	3	bc	1	29.332	48.3	47.3	93	46.7	7	...	Cir.	...	
Midt.	W.S.	1	cm	1	29.304	47.8	47.3	96	46.7	9	...	Cum.	...	
Totals	...	53	bc	42	5691	106.3	92.3	22	74.5	83	...	Cir.	Cum. & Str.	
Mean.	N.W.S.	4		4	29.467	48.9	47.7	92	46.8	7				

## WEDNESDAY, 9TH.

2.	N.W.W.	7	bc	...	29.292	45.8	44.8	93	46.5	8	...	Cum.	...	At noon, lat. 48° 10' S. long. 56° 9' W. Temperature by self-registering thermometer, max. 51° 7', min. 44° 7'. Current, N. 10° W. 11'. One or two albatross. Sp. gr. 1.02535.
4.	W.S.	3	bc	...	29.293	46.3	45.8	96	46.5	7	...	Cum.	...	
6.	W.	2	bc	...	29.323	46.3	45.8	96	46.0	4	...	Cir cum.	...	
8.	W.S.	1	bc	...	29.324	48.0	45.8	85	48.0	3	...	Cir str.	Cum.	
10.	W.S.	2	bc	...	29.327	50.8	45.8	68	50.0	2	...	Cr.&Cm.	...	
Noon.	N.W.S.	4	bc	3	29.314	50.8	46.3	71	50.0	9	...	Cum.	...	
2.	N.W.S.	3	bc	3	29.287	47.8	45.8	86	50.0	7	...	Cum.	...	
4.	W.N.W.	3	bc	2	29.244	46.8	44.8	86	50.5	7	...	Cum str.	...	
6.	W.S.	5	bc	4	29.195	46.0	43.8	85	49.7	8	...	Cm.&Cmst.	...	
8.	W.S.	5	bc	3	29.293	43.8	43.8	79	49.7	5	...	Cm.&Cmst.	...	
10.	W.S.	9	bc	4	29.382	45.0	43.3	87	51.0	10	...	Cm.&Cmst.	...	After 10.30 P.M., wind became steady in force.
Midt.	W.S.	7	bc	5	29.389	45.8	42.0	74	50.0	8	...	Cum.	...	
Totals	...	49	bc	21	5663	83.2	57.8	1006	587.9	78	...	Cir. & Cir cum.	Cum., Str., & Cum str.	
Mean.	W.S.	4		3	29.305	47.2	44.8	84	49.0	6				

## THURSDAY, 10TH FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	w.b.s.	8	beqpl	6	29.433	44.8	42.0	79	50.5	5	...	Cum.&Nb.		At noon, lat. 45° 28' s. long. 56° 9' w. Temperature by self-registering thermometer, max. 51° 5', min. 43° 2'. Current, N. 73° E. 28'. 0.30 A.M., hail squall. Stormy petrel seen. Sp. gr. 1.02527. 7.30 P.M., heavy squall with hail.
4.	w.b.s.	8	beq	7	29.477	46.0	43.0	79	50.2	8	...	Cum.		
6.	w.b.s.	6	be	6	29.522	47.3	43.8	76	50.5	4	...	Cum.		
8.	w.b.s.	8	beq	...	29.528	48.3	44.8	76	51.0	5	...	Cum.		
10.	w.	9	beq	6	29.573	50.3	47.8	83	51.0	2	...	Cum.		
Noon.	w.	5	beq	6	29.593	49.3	47.3	86	51.0	2	Cir str.	Cum.		
2.	w.b.s.	6	be	5	29.620	49.8	45.8	74	50.7	5	...	Cum.		
4.	w.b.s.	7	be	5	29.638	49.8	44.8	68	52.0	6	...	Cum.		
6.	w.b.s.	7	be	6	29.657	50.8	45.8	68	55.5	5	...	Cum.		
8.	w.b.s.	5	beqpl	...	29.699	49.3	45.8	76	55.5	5	...	Cum.		
10.	w.	7	beq	...	29.719	49.8	46.3	77	54.7	8	...	Str.&Cum.		
Midt.	w.b.s.	4	beq	...	29.762	51.3	46.8	71	55.6	3	...	Cum.		
Totals.	...	80		47	7221	106.8	64.0	913	27.6	65				
Mean.	w.b.s.	7	beqpl	6	29.602	48.9	45.3	76	52.3	5		Cir str.	Cum.	

## FRIDAY, 11TH.

2.	w.	7	be	4	29.800	52.3	47.5	70	56.7	6	...	Cum.		At noon, lat. 42° 32' s. long. 56° 27' w. Temperature by self-registering thermometer, max. 60° 5', min. 47° 8'. Current, N. 33° E. 13'. Albatross, stormy petrel, &c. Sp. gr. 1.02525.
4.	w.	5	be	3	29.806	53.3	48.5	71	56.7	4	...	Cum.		
6.	swbw.	5	be	4	29.828	55.0	50.8	74	57.0	4	Cum.&Str	...		
8.	N.W.	3	e	2	29.847	55.8	51.8	75	57.0	10	...	Cum.&Str.		
10.	N.W.	3	be	...	29.868	56.8	54.5	74	57.2	8	Cir.	Cum.		
Noon.	swbw.	3	be	...	29.769	56.8	53.8	81	57.5	9	...	Cum str.		
2.	N.N.W.	3	be	3	29.713	57.3	54.3	81	57.2	9	Cir str.	Cum.		
4.	N.N.W.	4	be	3	29.672	59.3	55.3	76	57.5	6	Cir str.	Cum.		
6.	swbw.	6	be	3	29.626	59.3	55.8	79	57.0	1	Cir.	...		
8.	NbE.	5	b	4	29.609	57.5	54.8	83	57.0	0	...	...		
10.	NbE.	3	b	...	29.604	57.3	54.8	84	57.0	0	...	...		
Midt.	N.N.W.	4	b	3	29.590	57.8	54.8	81	57.0	0	...	...		
Totals.	...	51		29	8672	80.5	36.7	89	84.8	57		Cir. & Cir str.	Cum. & Str.	
Mean.	swbw.	4		3	29.723	56.7	53.1	77	57.1	5				

## SATURDAY, 12TH.

2.	N.N.W.	6	b	4	29.533	57.8	55.3	84	57.0	0	...	...		At noon, lat. 41° 51' s. long. 54° 46' w. Temperature by self-registering thermometer, max. 66° 5', min. 56° 5'. Current, S. 48° E. 21'. Upper clouds rapidly from w. Sp. gr. 1.02559. Swell increasing.
4.	N.N.W.	4	be	3	29.488	60.3	56.8	79	58.9	5	Cir.&Cum.	Cum.		
6.	N.N.W.	6	e	3	29.477	60.3	58.8	91	59.0	10	...	Cum.		
8.	N.N.W.	6	...	...	29.437	62.3	60.3	88	59.5	...	...	...		
10.	N.N.W.	6	be	5	29.387	64.8	61.3	81	59.5	2	Cir cum.	...		
Noon.	N.W.	6	e	...	29.314	62.8	59.8	82	59.9	10	...	Cum.		
2.	N.W.	6	be	...	29.405	62.8	59.3	80	59.8	4	Cir.	Cum.		
4.	swbw.	5	be	...	29.441	63.3	60.3	82	60.5	3	Cir.	Str.		
6.	swbw.	4	bm	5	29.454	62.8	59.8	82	59.7	0	...	...		
8.	swbw.	5	b	4	29.520	60.8	58.5	86	59.5	0	...	...		
10.	N.N.W.	4	b	4	29.581	58.8	56.8	88	59.5	0	...	...		
Midt.	NbS.	7	be	4	29.662	58.8	56.8	88	58.5	6	Cir cum.	...		
Totals.	...	63		37	5699	15.6	103.8	51	110.4	40		Cir. & Cir cum.	Cum.	
Mean.	N.W.	5		4	29.475	61.3	58.6	84	59.2	3				

## SUNDAY, 13TH FEBRUARY 1876.

Hour.	Wind.		Weather	State of Sky, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	wbs.	3	bc	...	29.664	58.3	53.8	74	59.0	6	Cir.	Cum.	At noon, lat. 39° 5' s. long. 54° 17' w. Temperature by self-registering thermo- meter, max. 60° 5', min. 54° 0'. Current, s. 52° e. 5'. Water a dirty green colour.
4.	w.	5	bc	...	29.739	57.3	54.8	84	59.0	6	...	Cum.	
6.	w.	6	bcqn	...	29.849	55.8	51.5	74	59.0	5	Cir.	Cum.	
8.	wbs.	4	bc	...	29.914	56.0	51.5	73	54.0	4	...	Cum.	
10.	swbw.	5	bc	3	29.978	55.8	51.8	75	54.0	8	Cir cum.	Cum.	
Noon.	s.w.	4	bc	2	30.002	56.8	52.8	75	65.0	9	Cir cum.	Cum.	
2.	s.	5	bc	3	30.027	58.8	54.3	74	65.5	8	...	Cum.	
4.	s.	5	bc	4	30.051	58.5	53.5	71	65.5	9	...	Cum.	
6.	s.	5	bc	4	30.090	59.8	53.8	66	66.0	5	Cir.	Cum.	
8.	s.	5	bc	4	30.104	59.8	54.3	69	65.5	4	...	Cm. & Str.	
10.	sbg.	4	bc	4	30.112	60.0	53.0	62	64.0	3	...	Cum.	Wind gradually drawing to e. Sp. gr. 1.02526.
Midt.	sbg.	4	bc	3	30.146	59.8	52.8	62	64.0	3	...	Cum.	
Totals.	...	55	bcqn	26	11676	606.7	37.9	859	20.5	70	Cir. & Cir cum.	Cum.	
Mean.	swbs.	5		3	29.973	58.1	53.2	72	61.7	6			

## MONDAY, 14TH.

2.	sbs.	2	b	2	30.121	59.8	51.8	58	65.0	0	...	...	At noon, lat. 37° 17' s. long. 53° 52' w. Temperature by self-registering thermo- meter, max. 68° 5', min. 58° 0'. Current, s. 5° w. 17'.
4.	sbs.	1	bc	2	30.165	60.3	52.8	69	64.5	6	...	Cum.	
6.	s.e.	2	bc	2	30.210	60.5	54.5	66	66.5	4	...	Cum.	
8.	e.	...	bc	1	30.211	63.3	55.8	61	67.0	4	...	Cum.	
10.	bs.	...	bc	2	30.218	64.8	55.8	55	66.7	4	...	Cum.	
Noon.	sbs.	1	bc	2	30.226	66.8	56.8	52	67.5	3	...	Cum.	
2.	swbs.	2	bc	2	30.201	63.8	58.8	72	64.0	2	...	Cum.	
4.	swbw.	3	bc	...	30.185	63.3	57.3	67	64.0	2	...	Cum.	
6.	swbw.	1	bc	...	30.171	63.5	57.5	67	64.2	2	...	Cum.	
8.	Calm.	0	b	...	30.178	61.8	57.3	75	64.0	0	...	...	Albatross and mutton birds. Sp. gr. 1.02530.
10.	Calm.	0	bc	...	30.150	61.3	56.8	75	64.0	1	...	Cum.	
Midt.	Calm.	0	b	...	30.162	61.3	55.8	70	64.5	0	...	...	
Totals.	...	14	bc	13	2207	30.5	71.6	778	61.9	28	...	Cum.	
Mean.	sbs.e.	1		2	30.184	62.5	55.9	65	65.2	2			

## TUESDAY, 15TH.

2.	sbg.	1	bc	...	30.143	60.0	55.8	75	68.0	1	...	Cum.	At noon, lat. 34° 59' s. long. 55° 25' w.  4.15 P.M., anchored off Monte Video.
4.	s.e.	1	bc	...	30.121	62.8	56.8	67	68.0	8	Cir cum.	...	
6.	Calm.	0	bc	...	30.161	63.5	57.3	66	69.5	7	...	Cum.	
8.	sws.	1	bc	...	30.176	66.0	58.8	63	70.0	3	...	Cum.	
10.	sws.	1	bc	...	30.185	66.8	59.3	62	70.5	4	Cir.	Cum.	
Noon.	Calm.	0	bc	...	30.159	69.8	61.3	59	72.5	2	Cir.	Cum.	
2.	Calm.	0	bc	...	30.118	73.3	64.3	58	73.5	2	...	Cum.	
4.	wbs.	1	b	...	30.089	70.3	61.8	59	74.5	2	...	Cum.	
6.	bs.	1	b	...	30.057	73.8	64.5	57	74.5	0	...	...	
8.	bs.	2	b	...	30.056	68.8	62.8	68	...	0	...	...	
10.	bs.	2	b	...	30.046	67.3	62.3	73	...	0	...	...	
Midt.	bs.	3	b	...	30.041	65.3	59.8	71	...	0	...	...	
Totals.	...	13	bc	...	1352	57.7	4.8	778	11.0	29	Cir.	Cum.	
Mean.	Variable.	1		...	30.113	67.3	60.4	65	71.2	2			

## METEOROLOGICAL OBSERVATIONS.

711

WEDNESDAY, 16TH FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sky. 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity. Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True	Force				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE <sup>b</sup> E.	4	h	...	30.013	62.8	58.8	77	...	0	...	...	At Monte Video. Thistle-down blowing past the ship all day.
4.	NE <sup>b</sup> N.	3	h	...	29.996	61.3	58.8	85	...	0	...	...	
6.	NE <sup>b</sup> N.	3	h	...	30.042	61.3	58.8	85	71.7	0	...	...	
8.	NE <sup>b</sup> N.	4	h	...	30.051	65.0	61.3	80	...	0	...	...	
10.	NE <sup>b</sup> E.	4	h	...	30.053	72.3	65.3	65	...	1	...	...	
Noon.	NE <sup>b</sup> E.	1	be	...	30.025	70.8	67.3	80	...	4	...	...	
2.	SE <sup>b</sup> S.	1	be	...	29.986	76.8	69.3	65	...	4	...	...	
4.	SE <sup>b</sup> E.	2	be	...	29.956	76.0	68.5	65	...	1	...	...	
6.	E <sup>b</sup> S.	5	h	...	29.937	73.8	68.8	74	73.0	0	...	...	
8.	E <sup>b</sup> S.	4	be	...	29.917	71.0	67.8	82	...	2	...	...	
10.	NE <sup>b</sup> E.	4	h	...	29.889	68.8	65.8	83	...	0	...	...	Cum. & Str.
Midd.	NE <sup>b</sup> E.	4	be	...	29.846	67.8	64.8	83	...	3	...	...	
Totals.	...	39	be	...	11711	107.7	55.3	924	47	15	Cir.	Cum. & Str.	
Mean.	NE <sup>b</sup> E.	3		...	29.976	69.0	64.6	77	72.3	1			

THURSDAY, 17TH.

2.	NE <sup>b</sup> E.	4	be	...	29.847	66.8	64.8	88	...	4	...	Cum. & Str.	At Monte Video. Temperature by self-registering thermometer, max. 83° 5, min. 58° 5.
4.	NE <sup>b</sup> E.	2	be	...	29.856	66.0	64.3	90	...	2	...	Cum.	
6.	NE <sup>b</sup> E.	2	be	...	29.867	65.3	63.3	88	71.0	2	...	Cum. & Str.	
8.	NE <sup>b</sup> E.	2	be	...	29.866	67.5	65.8	90	...	5	...	Cum.	
10.	NE <sup>b</sup> E.	1	be	...	29.866	74.5	68.8	71	...	3	...	Cir.	
Noon.	NE <sup>b</sup> E.	1	be	...	29.858	77.0	70.3	68	...	4	...	Cir.	
2.	E.S.E.	1	be	...	29.775	81.8	74.0	65	...	4	...	Str.	
4.	E.S.E.	1	be	...	29.775	76.3	72.3	79	...	5	...	Str.	
6.	E.S.E.	4	be	...	29.779	74.5	70.8	80	71.5	7	...	Cir str.	
8.	E.S.E.	3	be	...	29.751	74.5	70.8	89	...	5	...	Str.	
10.	E.S.E.	1	bd	...	29.749	73.3	71.3	96	...	0	...	...	Cum. & Str.
Midd.	NE <sup>b</sup> S.	2	bd	...	29.774	71.5	69.8	96	...	4	...	Cum.	
Totals.	...	28	be	...	9786	26.5	106.8	994	...	48	Cir str.	Cum. & Str.	
Mean.	NE <sup>b</sup> E.	2		...	29.816	72.1	68.9	83	71.2	4			

FRIDAY, 18TH.

2.	NE <sup>b</sup> S.	3	bd	...	29.743	70.3	69.3	94	...	4	...	Cir.	Cum.	At Monte Video. Temperature by self-registering thermometer, max. 83°, min. 68° 5.
4.	NE <sup>b</sup> E.	1	be	...	29.742	70.0	68.8	93	...	1	...	...	Cum.	
6.	NE <sup>b</sup> E.	1	be	...	29.762	69.3	68.8	97	72.0	4	...	Cir.	Cum. & Str.	
8.	Caln.	0	be	...	29.799	73.8	71.3	87	...	6	...	Cir str.	Cum. & Str.	
10.	SW <sup>b</sup> W.	1	be	...	29.808	73.8	75.8	89	...	4	...	Cir.	Cum.	
Noon.	SW <sup>b</sup> W.	2	be	...	29.809	73.3	74.3	75	...	5	...	...	Cum.	
2.	S.S.E.	4	be	...	29.815	76.3	72.8	82	...	9	...	...	Cum str.	
4.	S.S.E.	3	be	...	29.830	76.0	70.8	74	71.0	8	...	Cir.	Cum.	
6.	SE <sup>b</sup> S.	4	be	...	29.840	71.3	67.0	77	...	0	...	Cir.	Cum.	
8.	SE <sup>b</sup> S.	3	be	...	29.879	69.3	62.3	66	...	6	...	...	Cum.	
10.	SE <sup>b</sup> S.	4	be	...	29.953	66.8	61.3	71	...	0	...	...	...	Cum. & Str.
Midd.	SE <sup>b</sup> S.	3	h	...	29.935	66.3	60.8	71	...	0	...	...	...	
Totals.	...	29	bd	...	9906	28.5	103.8	967	...	56	Cir.	Cum. & Str.		
Mean.	Variable.	2		...	29.826	72.4	68.6	81	71.5	5				

## SATURDAY, 19TH FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Exometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper	Lower	
2.	sebs.	4	b	...	29.944	66.0	60.5	71	...	0	...	...	At Monte Video. Temperature by self-registering thermo- meter, max. 73° 5', min. 64° 5'.
4.	sebs.	12	b	...	29.950	65.8	59.8	68	...	0	...	...	
6.	sbw.	3	bc	...	29.998	66.0	60.8	72	71.0	2	...	Cum.	
8.	swbs.	12	bc	...	30.014	68.3	62.0	67	...	1	...	Cum.	
10.	sbw.	4	bc	...	30.038	70.5	62.8	62	...	3	...	Cum.	
Noon.	sbw.	4	bc	...	30.049	70.3	62.3	61	...	4	...	Cum.	
2.	sbw.	5	bc	...	30.033	70.8	63.3	63	...	5	...	Cum.	
4.	swbs.	4	bc	...	30.026	69.8	64.3	71	...	6	...	Cum.	
6.	sbw.	5	bc	...	30.022	69.0	63.5	71	72.0	8	...	Cum.	
8.	sbw.	4	bc	...	30.051	64.8	59.8	73	...	4	...	Cum.	
10.	sebs.	5	b	...	30.073	63.8	58.8	72	...	0	...	...	
Midt.	sebs.	3	b	...	30.107	62.8	57.8	72	...	0	...	...	
Totals.	...	45	bc	...	605	57.9	15.7	823	...	33	...	...	
Mean.	s.	4		...	30.025	67.3	61.3	69	71.5	3	...	...	

## SUNDAY, 20TH.

2.	sebs.	3	b	...	30.068	61.8	56.3	69	...	0	...	...	At Monte Video. Temperature by self-registering thermo- meter, max. 79°, min. 59° 5'.
4.	sebs.	1	b	...	30.055	61.3	56.3	72	...	0	...	...	
6.	nbe.	1	b	...	30.084	61.0	58.8	87	71.0	0	...	...	
8.	nwb.	1	b	...	30.109	63.8	59.8	77	...	0	...	...	
10.	w.n.w.	1	b	...	30.108	70.8	63.3	63	...	0	...	...	
Noon.	w.n.w.	1	b	...	30.098	71.8	64.0	62	...	0	...	...	
2.	wbs.	1	b	...	30.058	77.3	67.3	56	...	0	...	...	
4.	wbs.	1	b	...	30.027	75.3	65.8	57	...	0	...	...	
6.	wbs.	1	b	...	30.007	72.3	65.3	65	72.0	0	...	...	
8.	nbe.	1	b	...	30.002	70.8	65.8	73	...	0	...	...	
10.	nebe.	2	b	...	29.991	68.8	64.8	78	...	0	...	...	
Midt.	n.n.e.	1	b	...	29.994	69.3	62.8	66	...	0	...	...	
Totals.	...	15	b	...	601	104.3	30.3	825	...	0	...	...	
Mean.	Variable.	1		...	30.050	68.7	62.5	69	71.5	0	...	...	

## MONDAY, 21ST.

2.	nbe.	3	b	...	29.983	66.3	61.8	76	...	0	...	...	At Monte Video. Temperature by self-registering thermo- meter, max. 84°, min. 68°.
4.	nbe.	4	b	...	29.971	66.3	61.8	76	...	0	...	...	
6.	n.	3	b	...	29.987	63.8	60.3	80	71.5	0	...	...	
8.	n.	5	b	...	30.015	66.0	60.5	71	...	0	...	...	
10.	nwb.	2	b	...	30.012	70.8	63.8	65	...	0	...	...	Thistle-down blowing over the ship.
Noon.	n.w.	2	b	...	29.991	74.8	65.0	56	...	0	...	...	
2.	swbs.	2	b	...	29.978	77.8	69.8	63	...	0	...	...	
4.	sebs.	1	b	...	29.889	81.8	70.8	54	...	0	...	...	
6.	e.s.e.	1	b	...	29.869	78.0	69.3	60	73.0	0	...	...	Drum-fish round screw aperture
8.	e.s.e.	2	b	...	29.855	72.8	69.3	81	...	0	...	...	
10.	nbe.	1	b	...	29.862	70.8	67.3	81	...	0	...	...	
Midt.	nbe.	2	b	...	29.854	67.8	64.8	83	...	0	...	...	
Totals.	...	27	b	...	11266	17.0	61.5	846	4.5	0	...	...	
Mean.	Variable.	2		...	29.939	71.4	65.4	71	72.2	0	...	...	

TUESDAY, 22<sup>D</sup> FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	N <sup>b</sup> E.	12	b	...	29.848	66.8	63.8	83	...	...	0	...	...	At Monte Video. Temperature by self-registering thermo- meter, max. 85°, min. 63°-2.
4.	N <sup>b</sup> E <sup>b</sup> N.	33	b	...	29.802	65.8	63.8	88	...	...	0	...	...	
6.	N <sup>b</sup> E <sup>b</sup> N.	12	b	...	29.862	65.3	63.8	91	72.0	...	0	...	...	
8.	N <sup>b</sup> E.	12	b	...	29.874	69.3	65.8	81	...	...	0	...	...	
10.	N <sup>b</sup> E.	1	bc	...	29.876	76.3	71.3	75	...	...	3	Cir.	Cum.	
Noon.	sw <sup>b</sup> w.	1	bc	...	29.851	77.3	69.8	65	...	...	12	Cir.	Cum.	
2.	se <sup>b</sup> s.	1	bc	...	29.856	80.8	73.8	68	...	...	4	Cir.	Cum.	
4.	E <sup>b</sup> s.	1	bc	...	29.783	80.5	73.8	68	...	...	3	Cir.	Cum.	
6.	se <sup>b</sup> E.	1	bc	...	29.774	78.8	73.3	73	75.2	...	3	Cir.	Cum.	
8.	E <sup>b</sup> s.	1	bc	...	29.797	75.3	71.3	79	...	...	12	...	Cum.	
10.	E <sup>b</sup> s.	12	bc	...	29.803	74.3	70.3	79	...	...	12	...	Cum.	
Midt.	E <sup>b</sup> s.	1	b	...	29.791	73.3	69.8	82	...	...	0	...	...	
Totals.	...	18	...	...	9917	883.8	110.6	932	7.2	19		Cir.	Cum.	
Mean.	Variable.	2	bc	...	29.826	73.6	69.2	78	73.6	2		Cir.	Cum.	

WEDNESDAY, 23<sup>D</sup>.

2.	N <sup>b</sup> E.	1	bc	...	29.755	71.0	67.5	81	...	1	...	Cm.&Str.	At Monte Video.
4.	N <sup>b</sup> E.	12	b	...	29.746	69.8	66.8	83	...	0	...	...	Thermometers tested in melting ice and found to register the temperature correctly to within 0.2°.
6.	N <sup>b</sup> E.	12	bc	...	29.747	67.8	65.8	88	72.5	12	...	Str.	
8.	N <sup>b</sup> E.	12	bc	...	29.779	72.3	68.3	79	...	12	...	Str.	
10.	w <sup>b</sup> s.	3	b	...	29.777	79.3	73.3	71	...	0	...	...	
Noon.	w <sup>b</sup> s.	12	bu	...	29.780	78.3	74.3	79	...	0	...	...	
2.	s.s.w.	1	bu	...	29.777	75.8	71.8	79	...	0	...	...	
4.	se <sup>b</sup> s.	12	b	...	29.777	74.8	72.8	89	...	0	...	...	
6.	se <sup>b</sup> s.	1	b	...	29.776	74.8	70.5	78	75.2	0	...	...	
8.	E <sup>b</sup> s.	12	b	...	29.779	73.0	69.8	83	...	0	...	...	
10.	E <sup>b</sup> s.	12	b	...	29.792	71.3	68.8	85	...	0	...	...	
Midt.	E <sup>b</sup> s.	12	b	...	29.794	70.3	67.8	85	...	0	...	...	
Totals.	...	22	...	...	9279	38.5	117.5	20	7.7	5		Cum. & Str.	
Mean.	Variable.	2	bu	...	29.773	73.2	69.5	82	73.8	0		Cum. & Str.	

THURSDAY, 24<sup>TH</sup>.

2.	E <sup>b</sup> s.	2	b	...	29.795	70.3	67.3	83	...	0	...	...	At Monte Video.
4.	E.	5	bc	...	29.797	70.0	67.0	83	...	2	...	Cm.&Str.	Dark red sky at sunrise. Low cumulus seal passing rapidly over from S.E.
6.	E <sup>b</sup> s.	4	bc	...	29.836	69.8	66.8	83	72.7	5	Cir str.	Cum.	
8.	E <sup>b</sup> s.	3	bc	...	29.889	69.8	66.3	81	...	9	...	Cum.	
10.	E.S.E.	5	bc	...	29.987	70.8	65.8	73	...	9	...	Cum.	
Noon.	E.S.E.	6	c	...	29.890	70.8	65.8	73	...	10	...	Cum.	
2.	E.S.E.	6	c	...	29.830	70.3	67.3	83	...	10	...	Cum.	
4.	E <sup>b</sup> s.	3	bc	...	29.797	72.8	68.8	79	...	8	...	Cum.	
6.	E <sup>b</sup> s.	4	bc	...	29.795	71.8	68.3	81	73.0	8	...	Cum.	
8.	E <sup>b</sup> s.	3	bc	...	29.788	72.0	68.8	83	...	7	...	Cum.	
10.	E <sup>b</sup> s.	4	bc	...	29.789	71.5	68.5	83	...	8	...	Cum.	
Midt.	N <sup>b</sup> E.	3	bc	...	29.789	70.8	67.8	83	...	5	...	Cum.	
Totals.	...	48	...	...	4682	10.7	88.5	8	...	81		Cir str.	Cum.
Mean.	E <sup>b</sup> s.	4	bc	...	29.832	70.9	67.4	81	72.8	7		Cir str.	Cum.

## FRIDAY, 25TH FEBRUARY 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.			Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.			Upper.	Lower.	
2.	E <sup>h</sup> N.	2	bel	...	29.796	70.8	68.3	85	...	4	...	Cm.&Str.	At noon, lat. 35° 0' s. long. 55° 41' w. Temperature by self-registering thermometer, max. 81°, min. 69°. 5.30 A.M., left Monte Video.
4.	E <sup>h</sup> S.	1	bel	...	29.785	71.3	68.8	86	...	4	...	Cm.&Str.	
6.	E <sup>h</sup> S.	2	bel	...	29.823	71.5	69.8	90	71.5	5	Cir cum.	Cum.	
8.	E.	1	be	...	29.829	73.3	70.8	87	72.0	6	Cir cum.	...	
10.	NE <sup>h</sup> E.	2	b	...	29.830	74.8	70.8	79	73.0	0	...	...	
Noon.	E.	1	b	...	29.823	79.8	73.8	71	75.0	0	...	...	
2.	SW.	2	be	...	29.798	75.3	71.8	82	73.0	1	Cir str.	Cum.	
4.	SW.	2	be	...	29.811	74.5	71.5	84	73.5	3	Cir str.	Cum.	
6.	E.S.E.	3	be	...	29.829	74.8	71.8	84	72.7	2	Cir str.	Cum.	
8.	E <sup>h</sup> S.	1	bel	...	29.839	73.8	71.3	87	72.7	3	...	Cum str.	
10.	E.	2	bl	...	29.831	73.5	71.8	91	72.7	0	...	...	
Midt.	SE <sup>h</sup> E.	3	bel	...	29.826	73.0	71.8	93	72.5	2	...	Cum str.	
Totals.	...	22	...	...	9820	46.4	12.3	1019	28.6	30	Cir str.	Cum. & Str.	
Mean.	E.S.E.	2	...	...	29.818	73.9	71.0	85	72.9	3	Cir cum.	...	

## SATURDAY, 26TH.

2.	SE <sup>h</sup> E.	3	belt	...	29.852	73.3	71.8	91	72.7	4	...	Cm.&C.S.	At noon, lat. 35° 22' s. long. 53° 28' w. Temperature by self-registering thermometer, max. 74°, min. 68° 5. Current, none. Sheet and forked lightning. Wind variable in force and direction. 2 to 3 A.M., incessant lightning. Sp. gr. 1.02291.
4.	SE <sup>h</sup> E.	1	belt	...	29.851	71.8	69.3	87	72.7	9	...	Cm.&C.S.	
6.	SE <sup>h</sup> S.	2	bel	...	29.835	71.3	69.8	91	72.7	6	Cir.	Cm.&Cmst.	
8.	E <sup>h</sup> S.	1	op	...	29.857	72.8	70.8	89	71.5	10	...	Cm.&Cmst.	
10.	E <sup>h</sup> S.	1	be	...	29.854	73.3	71.8	91	72.0	7	Cir.	Cum.	
Noon.	S.S.E.	2	e	...	29.861	70.8	68.8	88	72.0	9	...	Cum.	
2.	S.E.	3	e	...	29.844	70.5	68.0	86	71.7	10	...	Cum.	
4.	SE <sup>h</sup> S.	2	cp	...	29.852	69.8	68.8	94	71.7	10	...	Cum.	
6.	SE <sup>h</sup> E.	1	ac	...	29.833	70.8	69.3	91	...	10	...	Str.&Cm.	
8.	SE <sup>h</sup> E.	2	oed	...	29.829	70.8	68.8	88	70.5	10	...	Cm.&Cmst.	
10.	SE <sup>h</sup> E.	4	beqlw	...	29.791	69.3	65.8	81	70.0	9	...	Str.	Sea phosphorescent.
Midt.	E.S.E.	1	bel	...	29.723	71.3	67.8	81	69.5	5	...	Str.	
Totals.	...	23	...	...	9982	15.8	110.8	1058	17.0	99	...	Cm., Str., Cum str., & Nimb.	
Mean.	SE <sup>h</sup> E.	2	...	...	29.832	71.3	69.2	88	71.5	8	...	...	

## SUNDAY, 27TH.

2.	E.N.	0	bel	...	29.725	69.3	67.8	91	69.5	8	...	Cum.	At noon, lat. 35° 25' s. long. 52° 35' w. Temperature by self-registering thermometer, max. 74°, min. 63° 5. Current, w. 5. 7.10 A.M., wind shifted suddenly to w. and S.W., with heavy rain, thunder, and lightning in an arched squall. Sp. gr. 1.02697.
4.	NE <sup>h</sup> E.	1	bel	...	29.692	70.0	68.8	93	70.0	6	...	Cum.	
6.	N <sup>h</sup> E.	0	belt	...	29.693	70.3	69.8	97	...	5	...	Str.&Cm.	
8.	SW.	2	cuplt	...	29.713	65.3	64.3	99	69.5	10	...	Str.&Nlb.	
10.	SSW <sup>h</sup> W.	5	be	...	29.693	67.3	64.3	83	...	7	Cm.&Cum.	Cum.	
Noon.	WN.	3	be	...	29.701	68.8	68.8	73	73.5	6	Cir str.	Cir cum.	
2.	SSW <sup>h</sup> W.	7	b	3	29.690	70.3	65.3	73	73.2	0	...	...	
4.	SW.	7	b	4	29.681	71.8	67.8	79	73.2	0	...	...	
6.	SSW <sup>h</sup> W.	6	be	3	29.686	71.8	66.8	74	73.5	1	Str.	Cum.	
8.	SW.	5	b	2	29.737	70.8	65.8	73	72.5	0	...	...	
10.	N <sup>h</sup> E.	3	b	...	29.754	69.8	69.8	69	71.5	0	...	...	
Midt.	SSW <sup>h</sup> W.	1	be	1	29.752	69.3	65.3	78	71.0	1	...	Cum.	
Totals.	...	40	...	...	8517	114.8	73.6	376	17.4	44	...	Cir str.	Cum. & Str.
Mean.	Variable.	3	...	...	29.710	69.6	66.1	81	71.7	4	...	...	

## MONDAY, 28TH FEBRUARY 1876.

Hour.	Wind		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W <sup>1</sup> N.	1	b	1	29.745	69.3	64.8	75	70.7	0	...	...	At noon, lat. 35° 39' s. long. 56° 47' w. Temperature by self-registering thermo- meter, max. 77°, min. 68°. Current, s. 43° e. 4'.
4.	W <sup>1</sup> N.	2	b	...	29.725	69.8	64.8	73	71.5	0	...	...	
6.	W <sup>1</sup> N.	1	bc	...	29.793	70.5	67.5	83	73.5	1	...	Cum.	
8.	W <sup>1</sup> N.	2	b	...	29.827	72.8	68.8	79	72.7	0	...	...	
10.	W <sup>1</sup> N.	2	bc	...	29.837	71.8	67.8	79	73.0	2	Cata.C.cum.		Sp. gr. 1.02680.  Distant sheet lightning to s.s.w.
Noon.	NW <sup>1</sup> N.	2	b	...	29.833	73.8	69.8	79	73.5	0	...	...	
2.	NW <sup>1</sup> N.	2	b	...	29.816	74.3	68.8	72	73.5	0	...	...	
4.	N <sup>1</sup> E.	2	b	...	29.782	76.0	70.8	74	73.5	0	...	...	
6.	N <sup>1</sup> E.	2	b	...	29.776	74.8	70.3	77	74.2	0	...	...	
8.	N <sup>1</sup> E.	4	bc	...	29.809	72.5	69.8	86	73.5	3	...	Cm.&Str.	
10.	N <sup>1</sup> E.	3	bc	2	29.815	71.8	68.8	84	73.5	2	...	Cm.&Str.	
Midt.	N <sup>1</sup> E.	5	bcl	...	29.814	70.8	67.8	83	73.5	1	...	Str.	
Totals.	...	28	bcl	3	9572	28.2	99.8	944	36.6	9	Cir str.	Cum. & Str.	
Mean.	NW <sup>1</sup> S.	2		1	29.798	72.3	68.3	79	73.0	1	Cir cum.		

## TUESDAY, 29TH.

2.	N <sup>1</sup> E.	4	bl	...	29.779	70.8	68.3	85	70.0	0	...	...	At noon, lat. 36° 9' s. long. 48° 29' w. Temperature by self-registering thermo- meter, max. 72°, min. 66° 2. Current, s. 56° e. 30'.
4.	N <sup>1</sup> E.	3	bcl	...	29.778	70.8	67.8	83	70.0	4	...	Cm.&Str.	
6.	swbw <sup>1</sup> W.	2	bc	...	29.809	69.8	68.3	91	71.5	7	Cir.	Str.	
8.	Calm.	0	cm	...	29.789	70.8	68.3	85	71.5	10	...	Cm.&Str.	
10.	E <sup>1</sup> S.	2	c	...	29.779	71.0	68.8	87	72.0	10	...	Cum str.	Sp. gr. 1.02612.  Petrel seen.
Noon.	N <sup>1</sup> E.	1	cr	3	29.811	67.0	64.0	83	71.2	10	...	Cum.	
2.	N <sup>1</sup> E.	4	bcp	3	29.810	69.8	65.8	78	71.5	7	Cir str.	Cum.	
4.	S <sup>1</sup> E.	3	bc	...	29.807	69.8	65.8	78	71.5	8	Cir str.	Cum.	
6.	S <sup>1</sup> E.	4	bc	...	29.811	69.5	64.8	75	71.5	3	Cir.	Cr.cu&Cm	
8.	E <sup>1</sup> S.	3	bc	...	29.840	68.3	64.8	81	71.0	2	...	Cm.&Str.	
10.	E <sup>1</sup> S.	4	b	...	29.864	68.5	65.3	82	70.0	0	...	...	
Midt.	E <sup>1</sup> S.	1	bc	...	29.870	67.5	65.5	88	69.7	2	Cir.	...	
Totals.	...	31	bcp	6	9747	113.6	77.5	36	11.4	63	Cir. & Cir str.	Cum. & Str.	
Mean.	Variable.	3		3	29.812	69.5	66.5	83	70.9	5			

## WEDNESDAY, 1ST MARCH.

2.	NE <sup>1</sup> E.	2	bc	1	29.873	68.3	64.8	81	69.8	2	...	Cm.&Str.	At noon, lat. 36° 1' s. long. 47° 35' w. Temperature by self-registering thermo- meter, max. 75°, min. 66° 5. Current, s. 27° e. 12'.
4.	N <sup>1</sup> E.	1	bc	...	29.866	67.8	64.8	83	69.5	3	...	Cum.	
6.	Calm.	0	bc	...	29.917	67.8	64.8	83	69.8	3	...	Cum.	
8.	Variable.	0	bc	...	29.932	69.8	66.3	81	70.0	2	...	Cum.	
10.	Calm.	0	bc	...	29.940	72.3	67.8	77	71.0	2	...	Cum.	Sp. gr. 1.02649.  Cr.cu&Cm
Noon.	E <sup>1</sup> S.	1	bc	...	29.952	73.8	67.5	69	72.0	3	...	Cum.	
2.	E <sup>1</sup> S.	1	bc	...	29.931	73.8	67.5	69	72.2	3	...	Cum.	
4.	E <sup>1</sup> S.	3	bc	...	29.930	72.8	67.5	73	72.2	6	...	Cum.	
6.	E <sup>1</sup> N.	2	bc	...	29.929	71.3	66.8	75	72.0	5	...	Cum.	
8.	E <sup>1</sup> N.	2	bc	...	29.925	69.8	66.3	81	71.5	4	...	Cum.	
10.	NE <sup>1</sup> E.	3	bc	...	29.913	69.3	65.8	81	70.5	8	...	Str.	
Midt.	N <sup>1</sup> E.	2	bc	...	29.911	68.8	65.8	83	70.5	3	...	Str.	
Totals.	...	17	bc	...	11019	845.6	75.7	96	11.6	44	...	Cum. & Str.	
Mean.	E <sup>1</sup> N <sup>1</sup> S.	1		1	29.918	70.5	66.3	78	70.9	4			

## THURSDAY, 2D MARCH 1876.

Hour.	Wind		Weather.	State of Sea. 0 to 9	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	wet Bulb.				Upper.	Lower.	
2.	N. N. E.	12	bc	...	29.887	68.8	65.8	83	70.0	5	...	Cm.&Str.	At noon, lat. 36° 44' s. long. 46° 16' w. Temperature by self-registering thermo- meter, max. 75°, min. 67° 5. Current, s. 27° E. 18'.
4.	N.	1	bc	...	29.863	68.8	66.0	84	70.0	7	...	Cum.	
6.	Calm.	0	bc	...	29.868	69.3	66.8	86	70.0	7	Cir str.	Cum.	
8.	N.	1	bc	...	29.881	70.8	66.8	78	70.5	3	Cir.	Cum.	
10.	N.	1	bc	...	29.892	74.8	69.8	74	70.5	4	Cir.	Cum.	Sp. gr. 1.02682. After 10 P.M. the sky clouded over with cum str. Lightning to w.
Noon.	N.	2	bc	...	29.875	74.8	69.8	74	...	4	Cir.	Cum.	
2.	N.	1	bc	...	29.815	71.3	68.8	85	71.0	4	...	Cum.	
4.	N.	1	bc	...	29.809	73.8	69.8	79	71.5	1	...	Cum.	
6.	N <sup>W</sup> E.	2	bc	...	29.799	72.5	69.8	85	71.0	1	Cir cum.	Cum.	...
8.	N <sup>W</sup> E.	2	b	...	29.803	70.8	68.8	88	70.0	0	...	...	
10.	N <sup>W</sup> E.	3	bc	...	29.799	70.3	68.8	91	70.0	2	...	Str.	
Midt.	N. N. E.	1	ocd	...	29.814	70.3	69.3	94	70.0	10	Cir str.	Cm.&Str.	
Totals.	...	17		...	10105	16.3	100.3	1001	4.5	48			...
Mean.	N <sup>W</sup> E.	1	bc	...	29.842	71.4	68.4	83	70.4	4	Cir str.	Cum. & Str.	

## FRIDAY, 3d.

2.	N. N. E.	2	fwi	...	29.777	69.3	68.8	97	68.0	10	...	Str.	At noon, lat. 37° 0' s. long. 44° 23' w. Temperature by self-registering thermo- meter, max. 68.7°, min. 66° 0. Current, s. 79° E. 13'.
4.	N. N. E.	4	ftlt	...	29.720	69.3	67.2	88	68.0	10	...	Str.	
6.	N.	2	oilt	...	29.722	68.8	67.8	94	68.2	10	...	Nimb.	
8.	N. N. E.	2	ordt	...	29.760	67.8	66.8	94	68.5	10	...	Str.	
10.	Variable	1	our	...	29.734	67.8	66.8	94	68.0	10	...	Nimb.	Sp. gr. 1.02494.
Noon.	N <sup>W</sup> N.	3	omdp	...	29.706	67.8	66.8	94	68.2	10	...	Nimb.	
2.	N. E.	2	od	...	29.644	67.8	66.8	94	68.0	10	...	Str.	
4.	N. N. E.	0	odr	...	29.637	67.8	67.8	100	67.8	10	...	Cum str.	
6.	N <sup>W</sup> N.	1	od	...	29.633	68.3	67.5	96	67.8	10	...	Str.	...
8.	S. S. E.	1	bc	...	29.643	67.8	67.0	96	67.7	8	...	Str.	
10.	S. S. E.	3	bc	...	29.677	66.8	66.3	97	67.5	8	...	Cum str.	
Midt.	S <sup>W</sup> .	1	o	...	29.675	66.8	65.8	94	...	10	...	Str.	
Totals.	...	22		...	8328	96.1	85.5	58	87.7	116	...	Str., Cum str., & Nimb.	
Mean.	Variable.	2	oilt	...	29.694	68.0	67.1	95	68.0	10	...		

## SATURDAY, 4TH.

2.	S.	2	bc	2	29.673	67.8	66.8	94	67.0	8	...	Cm.&Str.	At noon, lat. 36° 52' s. long. 42° 47' w. Temperature by self-registering thermo- meter, max. 70° 8, min. 66° 2. Current, s. 79° E. 13'. Sp. gr. 1.02639.
4.	S. S. E.	3	oc	...	29.693	66.8	65.3	91	67.0	10	...	Cum.&Cum	
6.	S. E.	2	c	...	29.731	67.8	66.0	89	68.5	10	...	Cum.	
8.	S. E.	3	bc	...	29.761	67.8	64.8	83	69.0	8	Cir.	Cum.	
10.	E. S. E.	1	bc	...	29.761	68.3	65.0	82	69.7	7	...	Cum.	...
Noon.	E.	2	bc	...	29.753	68.8	65.5	82	69.2	8	...	Cum.	
2.	E.	1	c	...	29.743	69.8	66.8	83	70.2	10	...	Cm.&Str.	
4.	E <sup>N</sup> N.	2	c	...	29.750	69.8	66.8	83	70.2	10	...	Cm.&Str.	
6.	E.	2	c	...	29.746	69.3	65.8	81	70.2	10	...	Cm.&Cumst	...
8.	E.	3	c	...	29.742	68.3	65.5	84	70.0	10	...	Cum.	
10.	E <sup>N</sup> N.	3	c	...	29.747	68.5	65.5	83	70.0	10	...	Cum.	
Midt.	E <sup>N</sup> N.	3	c	...	29.743	68.0	65.0	83	69.5	10	...	Cum.	
Totals.	...	27		6	8843	101.0	68.8	58	110.5	111	...		
Mean.	E. S. E.	2	c	2	29.737	68.4	65.7	85	69.2	9	Cir.	Cum., Str., & Cum str.	

## SUNDAY, 5TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.	
	True Direction	Force				Dry Bulb.	Wet Bulb.				Upper.	Lower.		
2.	Calm.	0	oc		29.719	66.8	64.8	88	68.8	10	...	Cum.&Str.	At noon, lat. 37° 32' s. long. 42° 0' w. Temperature by self-registering thermo- meter, max. 74° 2, min. 65° 8. Current, s. 44° E. 19'.	
4.	N.E.	1	oc		29.705	66.8	64.5	86	68.8	10	...	Cum.&Str.		
6.	N.E.	1	oc		29.718	66.8	64.8	88	69.0	10	...	Cum.&Str.		
8.	Calm.	0	oc		29.769	67.8	65.8	88	69.5	10	...	Cum.		
10.	Calm.	0	be		29.762	70.8	67.8	83	70.0	3	...	Cum.	Sp. gr. 1.02612.  Bright yellow sunset.	
Noon.	w.	1	b		29.720	72.3	68.3	79	70.5	0	...	...		
2.	w.	1	b		29.714	73.8	69.3	77	69.0	0	...	...		
4.	w.	2	be		29.723	71.5	68.0	80	69.2	6	Cir cum.	Cum.		
6.	w.s.	2	be		29.738	69.8	66.8	83	...	6	Cir cum.	Cum.		
8.	s.w.	2	be		29.738	67.8	62.8	73	68.0	7	Cir.	Cum.		
10.	s.	1	cl		29.732	66.8	62.8	78	68.0	10	Cir str.	...		
Midt.	Calm.	0	cl		29.690	67.8	63.3	75	67.2	10	Cir str.	...		
Totals.	...	11		1a1	...	8728	108.8	69.0	978	98.0	82	Cir str. & Cir cum.	Cum. & Str.	
Mean. Variable.	1				...	29.727	69.1	65.7	81	68.9	7			

## MONDAY, 6TH.

2.	s.w.	6	ort		29.656	61.5	59.8	90	67.5	10	Cum.&Nb.		At noon, lat. 37° 38' s. long. 39° 36' w. Temperature by self-registering thermo- meter, max. 68°, min. 59°.
4.	s.	3	bel		29.647	61.0	58.0	82	67.5	6	Cum.		
6.	swbw.	6	bepp		29.665	61.8	57.8	77	67.2	7	Cum.&Cumst		
8.	w.s.w.	5	bepp		29.668	62.8	57.3	69	...	8	Cum.&Nb.		
10.	swbw.	7	bepp	5	29.734	62.8	55.8	63	67.5	7	Cum.		Sp. gr. 1.02578.
Noon.	w.s.w.	8	bepp	6	29.735	65.8	57.8	60	67.5	9	Cum.		
2.	w.	6	beq		29.773	63.8	57.8	67	67.0	7	Cum.&Str.		
4.	w.	7	be		29.783	62.8	55.8	63	63.5	2	Cum.		
6.	w.s.	6	beq	6	29.815	63.8	57.8	67	64.5	4	Cum.		
8.	w.s.	7	beq	7	29.873	62.8	56.8	67	65.5	6	Cum.&Str.		
10.	w.s.w.	5	be		29.947	62.8	56.8	67	65.5	5	Cum.		
Midt.	w.s.w.	6	be	6	29.953	63.8	56.3	61	...	5	Cum.		
Totals.	...	72		39	...	9249	35.5	87.8	833	63.2	76	Cum., Str., & Nimb.	
Mean.	w.s.s.	6	bepp	6	29.771	62.9	57.3	69	66.3	6			

## TUESDAY, 7TH.

2.	w.s.w.	6	b	7	29.982	63.3	55.8	61	65.2	0	...		At noon, lat. 37° 31' s. long. 36° 7' w. Temperature by self-registering thermo- meter, max. 71°, min. 61°. Current, s. 15° w. 9'. Black fish and albatross seen.
4.	w.	5	be	7	30.030	63.3	56.5	64	65.2	0	...		
6.	w.	6	be	6	30.088	63.8	56.3	61	...	4	Cum.		
8.	w.	4	be		30.123	64.8	56.8	59	65.5	3	Cir.		
10.	w.	3	be	4	30.176	66.0	50.5	66	65.2	2	Cum.		Sp. gr. 1.02610.  Long w.s.w. swell.
Noon.	w.	3	be	4	30.180	67.8	60.8	64	64.5	2	Cir str.		
2.	w.s.	3	b	4	30.221	70.8	62.8	61	64.7	0	...		
4.	w.s.	3	be		30.245	69.8	62.8	65	64.7	1	Cum.		
6.	N.W.	2	b	5	30.257	66.8	61.5	72	64.0	0	...		
8.	N.W.	3	b		30.261	65.8	61.5	77	64.2	0	...		
10.	N.	2	b	3	30.292	64.8	61.3	81	64.5	0	...		
Midt.	N.E.	3	b	3	30.292	64.8	60.8	78	64.0	0	...		
Totals.	...	43		43	...	2147	71.8	116.4	809	51.7	12	Cir str.	Cum.
Mean.	w.s.w.	4		5	30.179	66.0	59.7	67	64.7	1			

## WEDNESDAY, 8TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>W</sup> ½E.	4	b	...	30.275	64.3	61.3	82	64.5	0	...	...	At noon, lat. 37° 45' s. long. 33° 9' w. Temperature by self-registering thermo- meter, max. 69°, min. 62° 7'. Current, s. 70° e. 23'.
4.	N <sup>W</sup> ½E.	5	bc	...	30.253	63.8	60.8	82	64.5	1	Cir.	...	
6.	N <sup>W</sup> ½E.	4	bc	...	30.293	64.3	60.8	79	65.0	2	...	Cum.	
8.	N <sup>W</sup> ½E.	5	b	4	30.320	65.8	61.3	75	64.7	2	...	Cum.	
10.	N <sup>W</sup> ½E.	5	b	...	30.323	66.8	61.5	72	64.2	0	...	...	Several albatross, Cape hens, and petrel seen. Sp. gr. 102627.
Noon.	N <sup>W</sup> ½E.	3	b	...	30.317	67.3	62.5	74	64.0	0	...	...	
2.	N <sup>W</sup> ½E.	3	b	...	30.282	67.8	62.8	73	64.0	0	...	...	
4.	N <sup>W</sup> ½E.	3	bc	...	30.271	67.5	63.8	79	64.2	1	Cir.	...	
6.	N <sup>W</sup> ½E.	4	b	...	30.253	65.8	63.3	85	...	0	...	...	
8.	N <sup>W</sup> ½E.	4	b	...	30.259	64.8	63.3	91	63.7	0	...	...	
10.	N <sup>W</sup> ½E.	4	b	...	30.251	65.3	63.5	89	64.0	0	...	...	
Midt.	N <sup>W</sup> ½E.	4	b	...	30.237	65.0	63.8	93	64.5	0	...	...	
Totals.	...	48		13	3334	68.5	28.7	974	47.3	6	Cir.	Cum.	
Mean.	N <sup>W</sup> ½E.	4	bc	3	30.278	65.7	62.4	81	64.3	1	Cir.	Cum.	

## THURSDAY, 9TH.

2.	N <sup>W</sup> ½E.	5	bew	...	30.203	64.8	63.8	94	64.2	2	...	Cum.	At noon, lat. 37° 47' s. long. 36° 26' w. Temperature by self-registering thermo- meter, max. 70° 5', min. 63° 5'. Current s. 52° w. 27'.
4.	N <sup>W</sup> ½E.	3	bew	3	30.179	64.8	63.5	93	64.2	6	...	Cum.	
6.	N <sup>W</sup> ½E.	4	bew	3	30.154	64.8	63.8	94	64.5	4	...	Cum.&Str.	
8.	N <sup>W</sup> ½E.	5	bew	...	30.140	65.8	64.8	94	64.7	8	...	Cum.	
10.	N <sup>W</sup> ½E.	4	bew	...	30.139	68.0	65.8	87	64.7	...	...	Cum.	Sp. gr. 102628.
Noon.	N <sup>W</sup> ½E.	4	bew	...	30.111	68.8	66.8	88	64.7	7	...	Cum.	
2.	N <sup>W</sup> ½E.	4	bew	...	30.063	67.0	65.5	91	64.7	9	...	Cum.	
4.	N <sup>W</sup> ½E.	4	bew	...	30.052	69.0	66.8	87	64.7	10	...	Cum.	
6.	N <sup>W</sup> ½W.	5	cm	...	30.040	68.3	66.8	91	65.0	9	...	Cum.&Str.	Seal flying rapidly over.
8.	N <sup>W</sup> ½W.	6	cmw	...	30.027	67.8	65.8	88	65.0	10	...	Cum.	
10.	N <sup>W</sup> ½W.	5	cmw	3	30.050	66.8	65.8	94	64.5	10	...	Cum.&Str.	
Midt.	N <sup>W</sup> ½W.	7	cmw	3	30.010	66.3	65.3	94	64.2	10	...	Cum.&Str.	
Totals.	...	56		15	1168	82.2	64.5	15	55.1	85	...	Cum. & Str.	
Mean.	N.	5	cmw	3	30.097	66.8	65.4	91	64.6	8	...	Cum. & Str.	

## FRIDAY, 10TH.

2.	N.N.W.	6	omw	...	30.008	66.0	65.3	96	64.0	10	...	Cum.	At noon, lat. 37° 29' s. long. 27° 31' w. Temperature by self-registering thermo- meter, max. 67°, min. 58°. Current, s. 8'.
1.	N.N.W.	5	om	...	29.994	66.0	65.5	97	65.0	10	...	Cum.	
6.	N.W.N.	5	om	...	30.024	66.3	65.3	94	64.7	10	...	Str.	
8.	N.N.W.	5	om	...	30.051	66.3	65.3	94	64.5	10	...	Cum.&Str.	
10.	S.W.	3	om	...	30.095	63.3	62.3	94	65.0	10	...	Cum.&Cmst	8.15 A.M., wind shifted suddenly and fell light. Sp. gr. 102612.
Noon.	S.E.N.	2	om	3	30.084	62.3	60.8	91	64.0	10	...	Cum.	
2.	S.E.N.	3	oer	...	30.086	60.8	59.8	94	64.0	10	...	Cum str.	
4.	S.E.N.	3	oep	3	30.056	60.8	59.3	91	63.7	10	...	Cum str.	
6.	S.E.N.	4	od	...	30.061	59.3	58.8	97	63.5	10	...	Str.	
8.	S.E.N.	3	odqrp	...	30.059	59.3	58.8	97	63.5	10	...	Str.&Nb.	
10.	S.E.N.	5	omr	...	30.052	58.8	58.8	100	63.5	10	...	Cum.&Str.	
Midt.	S.E.N.	4	omr	...	30.046	58.8	57.8	94	63.5	10	...	Cum.&Str.	
Totals.	...	48		9	616	28.0	17.8	59	48.9	129	...	Cum., Str., Cum str., & Nimb.	
Mean.	Variable.	4	omp	3	30.051	62.3	61.5	95	64.1	10	...	Cum., Str., & Nimb.	

## SATURDAY, 11TH MARCH 1876.

H. or.	Wind.		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea Level	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	S <sup>W</sup> E.	4	od	1	30.036	57.8	57.8	100	62.7	10	...	Str.	At noon, lat. 36° 22' S., long. 26° 1' W.
4.	S <sup>W</sup> E.	4	od	2	30.008	58.3	57.8	97	62.7	10	...	Str.	Temperature by self-registering thermo-
6.	S <sup>W</sup> E.	3	o	...	30.016	58.8	56.8	88	62.5	10	...	Str.	meter, max. 63° 5, min. 56° 5.
8.	E. S. E.	3	od	...	30.063	58.8	57.8	94	62.5	10	...	Cum str.	Current, N. 50° W. 9'.
10.	E. S. E.	2	op	...	30.067	59.3	57.8	91	63.5	10	...	Cum str.	
Noon.	E. S. E.	2	od	...	30.061	60.8	58.8	88	64.7	10	...	Cum str.	
2.	E. S. E.	2	oc	...	30.067	62.8	61.3	91	65.0	10	...	Cum str.	Slight S. swell. A few albatross and
4.	E. S. E.	2	ocml	...	30.039	62.3	61.8	97	65.0	10	...	Cum str.	stormy petrel seen.
6.	E. S. E.	2	ocml	...	30.045	63.3	62.8	97	65.5	10	...	Str.	Sp. gr. 1.02591.
8.	E. N. E.	2	oml	...	30.054	63.8	63.0	96	65.7	10	...	Str.	8 to 10 P.M., wind hauling round
10.	N. W.	2	ompl	...	30.063	64.3	64.3	100	65.5	10	...	Cum str.	gradually to N.
Milt.	N. W.	0	ocw	...	30.058	65.3	65.3	97	65.5	10	...	Cum str.	
Totals.	...	30	oml	5	691	16.6	5.8	56	59.8	120	...	Cum., Str., & Cum str.	
Mean.	E.	3		2	30.050	61.4	60.5	95	64.2	10			

## SUNDAY, 12TH.

2.	N. W. S.	2	op	2	30.015	66.8	66.8	100	66.9	9	Cir cum.	Cum str.	At noon, lat. 35° 52' S., long. 24° 12' W.
4.	N. W. S.	4	oc	...	29.995	66.3	65.8	97	66.0	10	...	Cum str.	Temperature by self-registering thermo-
6.	N. W.	3	beta	...	29.994	66.8	66.3	97	66.5	8	Cir str.	Cum.	meter, max. 72° 5, min. 62°.
8.	N. W.	3	cm	...	30.005	67.3	66.8	97	67.0	9	Cir str.	Str.	Current, S. 51° W. 3'.
10.	N. W.	3	bcm	...	30.004	68.8	67.8	94	67.5	8	...	Cum str.	2 A.M., high sea coming rapidly from
Noon.	N. W. S.	3	bc	...	29.976	70.0	68.5	91	68.0	7	Cir.	Cum.	W. S.
2.	N. N. W.	3	bc	...	29.940	70.8	68.8	88	68.5	7	Cir.	Cum.	Sp. gr. 1.02602.
4.	N. N. W.	5	bc	...	29.905	69.8	67.8	88	69.0	9	Cir.	Cum str.	
6.	N. W. S.	5	c	...	29.918	69.8	67.8	88	68.2	10	Cir str.	Str.	
8.	N. W. S.	4	bc	...	29.912	68.8	66.8	88	68.0	6	...	Str.	
10.	N. W. S.	5	bc	...	29.896	68.5	66.8	90	65.5	8	...	Cum str.	
Milt.	N. W. S.	4	c	...	29.873	68.0	66.8	93	65.7	10	...	Cum.	
Totals.	...	44	bcml	...	11436	191.7	86.8	31	83.9	101	Cir. & Cir str.	Cum. & Str.	
Mean.	N. W. S.	4		2	29.953	68.5	67.2	93	67.0	8			

## MONDAY, 13TH.

2.	N. W. S.	5	oc	...	29.843	67.8	66.8	94	66.0	10	...	Cum str.	At noon, lat. 35° 36' S., long. 21° 12' W.
4.	N. W. S.	4	oc	...	29.813	67.8	66.8	94	67.0	10	...	Cum str.	Temperature by self-registering thermo-
6.	N. W. S.	5	c	3	29.827	68.8	67.8	94	67.0	10	...	Sea Cum.	meter, max. 72° 5, min. 66° 5.
8.	N. W. S.	6	ocm	4	29.840	69.3	68.8	97	67.0	10	...	Cum str.	Current, S. 82° E. 7'.
10.	N. W. S.	5	c	3	29.839	70.8	68.8	88	67.0	10	...	Cum str.	After 7 A.M. weather became damp and
Noon.	N. W. S.	6	c	4	29.873	71.3	68.8	85	67.0	10	...	Cum str.	thick.
2.	N. W. S.	5	c	...	29.848	69.8	68.0	89	67.5	10	...	Cum str.	Sp. gr. 1.02619.
4.	N. W. S.	4	bc	...	29.844	70.5	68.8	89	67.5	8	...	Cum str.	
6.	N. W. S.	5	c	...	29.852	69.8	68.8	94	67.5	10	...	Cum str.	
8.	N. W. S.	6	ocm	...	29.861	69.8	68.8	94	68.0	10	...	Cum str.	
10.	N. W. S.	5	ocr	...	29.927	68.8	68.8	100	67.2	10	...	Str.	
Milt.	N. W. S.	5	or	...	29.848	68.8	68.3	97	67.0	10	...	Str.	
Totals.	...	61	ocmp	14	19215	113.3	99.3	35	85.7	115	...	Cum., Str., & Cum str.	
Mean.	N. W. S.	5		4	29.851	69.4	68.3	93	67.1	10			

TUESDAY, 14TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w.½N.	4	oe	...	29.827	68.8	68.0	95	67.7	10	...	Str.	At noon, lat. 35° 45' s. long. 18° 31' w. Temperature by self-registering thermometer, max. 72°, min. 67°.
4.	w.½N.	3	oecl	...	29.815	68.8	68.0	95	67.7	10	...	Cum.	
6.	w.½N.	4	cm	...	29.848	68.8	67.8	94	67.5	10	...	Str.	
8.	w.½N.	2	cm	...	29.853	68.8	67.8	94	67.5	10	...	Cum. & Str.	
10.	w.½N.	3	orm	...	29.868	69.8	68.8	94	67.5	10	...	Cum. & Cumst.	
Noon.	w.½N.	3	omrd	3	29.859	69.8	69.3	97	68.0	10	...	Str.	
2.	swb½w	3	opd	3	29.839	70.8	70.3	97	68.5	10	...	Str.	
4.	swb½w	4	ocm	4	29.801	69.8	68.8	94	68.5	10	...	Str.	
6.	swb½w	6	bc	4	29.815	69.8	68.8	94	68.5	2	...	Str.	
8.	sw½N.	5	bc	4	29.851	69.8	68.8	94	68.5	3	...	Cum. & Str.	
10.	sw½w	6	bc	...	29.834	69.8	68.8	94	68.0	5	...	Cum. & Cumst.	Several albatross seen Sp. gr. 1.02611.
Midt.	sw½w	5	bc	3	29.861	70.3	68.8	91	68.0	8	...	Cum. & Cum	
Totals.	...	48		21	10101	115.1	104.0	53	95.9	98		Cum., Str., & Cum str.	
Mean.	w. N. W.	4	cmpt	3	29.842	69.6	68.7	94	68.0	8			

WEDNESDAY, 15TH.

2.	sw½N.	6	bc	3	29.833	70.3	69.3	94	68.0	8	...	Str.	At noon, lat. 34° 9' s. long. 15° 46' w. Temperature by self-registering thermometer, max. 75°, min. 68° 5. Current, s. 39° E. 15°.
4.	swb½w.	5	bew	2	29.821	69.8	69.3	97	68.0	9	...	Cum. & Str.	
6.	sw½N.	5	bc	...	29.850	70.3	69.8	97	69.7	8	...	Str.	
8.	swb½w.	3	bc	...	29.867	71.3	70.3	94	70.0	8	...	Cir.	
10.	swb½w.	4	bc	...	29.866	72.3	70.8	91	70.5	8	...	Cum.	
Noon.	swb½w.	4	bc	...	29.884	73.8	71.8	89	71.0	7	...	Cir.	
2.	swb½w.	4	bc	...	29.865	74.8	71.8	84	71.0	5	...	Cir cum.	
4.	swb½w.	4	bc	2	29.852	73.8	71.3	86	70.5	1	...	Cir str.	
6.	swb½w.	3	bcm	...	29.856	72.8	70.8	89	71.0	1	...	Str.	
8.	swb½w.	3	bc	...	29.851	71.5	70.5	94	71.0	1	...	Cum.	
10.	swb½w.	4	bc	...	29.865	71.8	70.8	94	71.0	2	...	Cum.	Sp. gr. 1.02640.
Midt.	swb½w.	5	bey	...	29.832	72.8	71.3	91	73.7	3	...	Cum.	
Totals.	...	50		7	10242	25.3	7.8	29	5.4	56		Cir str.	Cum. & Str.
Mean.	S. N. W.	4		2	29.853	72.1	70.6	92	70.4	5			

THURSDAY, 16TH.

2.	S. N. W.	5	bc	2	29.798	72.8	71.3	91	73.0	2	Cir cum.	...	At noon, lat. 32° 24' s. long. 13° 5' w. Temperature by self-registering thermometer, max. 77°, min. 70°. Current, s. 29° E. 17°. 10 A.M., wind shifted in a heavy rain squall.
4.	swb½N.	6	bc	2	29.759	72.8	71.3	92	73.0	6	Cir cum.	Cum.	
6.	S. N. W.	5	bcm	2	29.782	73.3	71.8	91	73.0	4	Cir str.	Cum.	
8.	S. N. W.	6	bcm	3	29.801	74.3	71.8	86	73.2	4	Cir cum.	Cum.	
Noon.	wbs.	5	bcp	...	29.829	72.8	71.3	92	73.5	4	...	Cum.	
2.	w.	4	bcpd	4	29.834	75.8	72.8	84	73.5	6	Cir str.	Cum. & Str.	
4.	wbs.	4	bc	...	29.847	75.5	71.8	80	73.5	7	...	Cum. & Str.	
6.	w.	3	c	3	29.841	74.3	71.8	87	73.5	6	...	Cum. & Nlb.	
8.	wbs.	3	c	2	29.871	72.5	68.3	78	73.0	10	Cum. & Str.	Cum.	
10.	wbs.	3	c	...	29.903	71.8	67.8	79	73.0	10	...	Cum str.	
Midt.	s.w.	3	bc	...	29.939	71.3	67.5	79	73.0	9	...	Cum str.	
				...	29.937	70.8	66.0	74	73.0	7	Cir.	Cum.	
Totals.	...	52		18	10141	58.6	3.5	1013	22	75		Cir cum. & Str.	Cum., Str., & Nimb.
Mean.	wbs½N.	4	bcpd	3	29.845	73.2	70.3	84	73.2	6			

## FRIDAY, 17TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.			Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, (to 10).	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.					Upper.	Lower.	
2.	W.S.W.	3	bc	3	30.962	70.8	64.8	69	74.0	8	...	Cum.		At noon, lat. 30° 26' S. long. 13° 13' W. Temperature by self-registering thermo- meter, max. 73° 7', min. 68° 5'. Current, E. 3°.
4.	S.W.	4	bc	...	30.956	70.3	64.8	71	75.0	6	...	Cum. & Str.		
6.	S.W.	3	c	...	30.971	69.8	64.8	73	75.0	10	...	Cum.		
8.	S.W.	3	p	3	30.939	70.3	63.3	65	75.0	10	Cir. cum.			
10.	S.	3	bc	...	30.950	70.8	64.8	69	75.5	9	Cir.			
Noon.	S.S.E.	4	bc	...	30.955	71.8	65.3	67	76.0	9	...	Cum.		Sp. gr. 1.02695.
2.	S.E.	4	bc	...	30.952	71.8	65.5	68	76.0	8	Cir.			
4.	S.S.E.	4	bc	...	30.958	70.8	64.3	67	76.0	9	...	Cum.		
6.	S.E.	5	c	...	30.984	70.8	65.3	71	76.0	10	...	Cum.		
8.	S.E.	4	c	3	30.119	70.8	65.8	73	75.0	10	...	Cum.		
10.	S.E.	5	bc	...	30.115	71.8	65.8	69	75.7	8	...	Cum.		Midd.
	S.E.	5	bc	4	30.102	71.3	66.3	73	75.0	9	...	Cum.		
Totals.	...	47	c	13	554	11.1	69.8	115	64.2	106		Cir.	Cum.	
Mean.	S.S.E.	4		3	30.046	70.9	65.1	69	75.4	9				

## SATURDAY, 18TH.

2.	S.E.	5	bc	...	30.082	72.0	67.3	75	75.5	8	...	Cum.		At noon, lat. 27° 47' S. long. 13° 24' W. Temperature by self-registering thermo- meter, max. 73° 7', min. 67° 2'. Current, S. 51° W. 13°.
4.	S.E.	5	c	...	30.065	72.3	67.8	77	75.2	10	...	Cum.		
6.	S.E.	6	c	...	30.064	72.5	67.8	76	75.9	10	...	Cum.		
8.	S.E.	6	oc	...	30.092	73.3	68.3	74	76.0	10	...	Cum str.		
10.	S.E.	6	oc	...	30.118	72.8	68.8	79	76.0	10	...	Cum.		
Noon.	S.E.	7	o pq	5	30.114	69.8	68.3	91	76.0	10	...	Cum & Cum str.		Sp. gr. 1.02707.
2.	S.E.	7	ocupp	6	30.103	69.8	68.8	94	76.5	10	...	Cum & Str.		
4.	S.E.	6	ocp	6	30.105	69.8	68.3	91	76.5	10	...	Str.		
6.	S.E.	5	ed	...	30.128	69.8	67.8	88	76.9	9	...	Str & Cum str.		
8.	S.S.E.	6	cq	...	30.130	71.8	68.8	84	76.7	10	...	Cum & XNb		
10.	S.E.	5	bc	...	30.132	72.3	69.8	87	76.9	3	...	Cum.		Midd.
	Variable.	2	bc	...	30.135	73.3	70.8	86	76.5	7	...	Cum.		
Totals.	...	66	cqp	21	1268	19.5	102.6	100.2	71.9	107		Cum., Str., & Cum str.		
Mean.	S.E.	5		5	30.106	71.6	68.5	83	76.0	9				

## SUNDAY, 19TH.

2.	E.N.E.	4	bc	...	30.086	74.3	71.3	84	76.2	7	Cir str.	Cum.		At noon, lat. 24° 38' S. long. 13° 36' W. Temperature by self-registering thermo- meter, max. 80°, min. 68°. Current, S. 51° W. 14°.
4.	E.	5	bc	...	30.061	74.8	70.3	77	77.0	7	...	Cum.		
6.	E.	3	bc	...	30.091	74.8	70.3	77	76.7	4	Cir.	Cum.		
8.	S.E.	...	bc	...	30.107	74.8	71.8	84	76.5	7	Cir.	Cum.		
10.	E.	3	bc	...	30.111	77.8	72.8	75	76.5	5	Cir.	Cum.		
Noon.	E.	2	bc	...	30.091	78.8	73.8	75	77.0	4	Cir.	Cum.		1.15 A.M., a large solitary wave passed the ship, travelling to S.; height, 15 feet above the mean sea level. Heavy south swell at intervals.
2.	S.E.	2	bcp	3	30.074	75.3	72.3	84	77.0	3	...	Cum.		
4.	E.	4	cqp	5	30.047	74.8	72.8	89	77.0	10	...	Cum & Cum str.		
6.	S.E.	6	cpl	...	30.076	73.3	71.8	91	77.0	10	...	Cum.		
8.	S.E.	7	cqp	...	30.073	73.0	71.3	90	77.0	10	...	Cum.		
10.	E.	1	bc	...	30.047	73.8	71.3	87	76.5	3	...	Cum & Str.		Midd.
	E.	2	bc	...	30.067	73.8	72.8	94	76.0	6	...	Cum & XNb		
Totals.	...	39	bcp	8	991	59.9	22.6	100.7	80.4	76		Cir.	Cum. & Cum str.	
Mean.	E.S.	4		4	30.075	74.9	71.9	84	76.7	6				

## MONDAY, 20TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea. 4 to 5.	Barometer reduced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>bs</sup> .	4	cpr	4	30.036	71.3	69.8	91	77.0	10	...	Cm.&Cmst	At noon, lat. 23° 17' s. long. 13° 51' w. Temperature by self-registering thermo- meter, max. 77° 8, min. 70°. Current, s. 63° w. 15'. 1.45 A.M., wind fell light and almost calm for a short time. 3 A.M., weather cleared. Sp. gr. 1.02718
4.	S.E.	1	bc	4	30.029	71.8	70.3	91	77.0	5	...	Cum.	
6.	E.N.	2	bc	6	30.047	73.8	71.3	87	...	4	Cir cum.	Cum.	
8.	E.N.E.	2	bc	6	30.071	75.8	71.5	78	77.0	3	...	Cum.	
10.	N.E.	2	bcp	...	30.076	76.3	72.3	79	77.2	4	Cir cum.	Cum.	
Noon.	N.E.	2	bc	...	30.071	76.0	71.5	77	77.2	5	Cir cum.	Cum.	
2.	N.E.	2	bc	3	30.044	76.8	71.8	75	77.0	3	...	Cum.	
4.	N.E.	2	bc	6	30.031	76.8	71.8	75	77.0	2	...	Cum.	
6.	N.E.	2	bc	6	30.056	75.8	71.3	77	77.0	4	Cir str.	Str.&Cum.	
8.	N.E.	1	bc	...	30.063	75.8	71.8	79	77.0	2	...	Str.	
10.	N.E.	2	bc	...	30.082	75.8	71.0	76	77.0	4	...	Str.	
Midd.	N.E.	2	bc	...	30.078	75.0	70.0	74	77.0	4	...	Cm.&Str.	
Totals.	...	24	bcp	35	684	61.0	144	959	4	50	Cir. & Cir cum.	Cum., Str., & Cum str.	
Mean.	N <sup>1</sup> / <sub>2</sub> E.	2		5	30.057	75.1	71.2	80	77.0	4			

## TUESDAY, 21st.

2	E.N.E.	2	bc	...	30.026	74.8	69.8	74	77.0	3	...	Cum.	At noon, lat. 21° 15' s. long. 14° 2' w. Temperature by self-registering thermo- meter, max. 80°, min. 73° 2. Current, s. 47° w. 19'. Sp. gr. 1.02762.
4	E.N.E.	2	bc	...	30.016	74.8	69.8	74	76.5	3	...	Cum.	
6.	E.N.E.	3	bc	3	30.047	74.8	69.8	74	76.5	2	Cir.	Cum.	
8.	E.	3	bc	3	30.045	75.8	69.8	71	76.5	2	...	Cum.	
10.	E.	3	bc	...	30.044	78.8	71.3	65	76.5	1	...	Cum.	
Noon.	E.	3	bc	2	30.040	76.3	70.3	71	76.5	1	...	Cum.	
2.	E.	2	bc	...	29.996	78.8	72.8	71	76.7	1	Cir cum.	Cum.	
4.	E <sup>bs</sup> .	3	bc	...	30.009	79.0	71.8	66	76.7	2	...	Cum.	
6.	E.	2	bc	...	30.023	76.8	70.8	71	76.5	3	Cir str.	Cum.	
8.	E.	2	bc	2	30.048	75.8	70.8	75	76.5	2	...	Cum.	
10.	E.	2	bc	...	30.062	75.3	70.8	77	76.5	4	...	Cum.	
Midd.	E.	2	bc	...	30.041	75.8	70.8	75	76.0	4	...	Cum.	
Totals.	...	29	bc	10	397	76.8	8.6	24	64	28	Cir. & Cir str.	Cum.	
Mean.	E <sup>1</sup> / <sub>2</sub> S.	2		2	30.033	76.4	70.7	72	76.5	2			

## WEDNESDAY, 22d.

2.	E.	1	bc	...	30.027	75.5	71.0	77	76.5	6	...	Cum.	At noon, lat. 19° 40' s. long. 13° 56' w. Temperature by self-registering thermo- meter, max. 76° 5, min. 73° 0. Current, s. 75° w. 12'. One flying fish. Sp. gr. 1.02760.
4.	E <sup>bs</sup> .	3	bc	...	29.999	75.8	71.3	77	76.2	8	...	Cum.	
6.	E <sup>bs</sup> .	2	bc	...	30.026	75.0	71.5	82	76.5	8	...	Str.&Cum.	
8.	E.	3	bc	...	30.047	75.8	71.3	77	76.5	9	...	Cm.&Str.	
10.	N.E.	4	c	...	30.076	75.8	71.8	79	76.5	10	...	Cm.&Cmst	
Noon.	N.E.	3	bcp	...	30.048	75.8	72.3	81	76.5	7	...	Cum.	
2.	N.E.	3	bc	...	30.024	75.8	71.8	79	76.5	8	...	Cm.&Str.	
4.	E <sup>bs</sup> .	3	bcpd	2	30.020	75.8	71.8	79	76.5	9	...	Cm.&Str.	
6.	E.	3	bc	3	30.030	75.8	72.0	80	76.5	7	...	Cm.&Str.	
8.	E.	3	bc	...	30.057	75.8	72.3	81	76.0	5	...	Cm.&Nls	
10.	E.	4	c	...	30.060	75.3	72.3	84	76.0	10	...	Cm.&Cmst	
Midd.	E.	5	eqpd	3	30.050	74.8	71.8	84	76.5	10	...	Cm.&Cmst	
Totals.	...	37	bcpd	8	464	67.0	21.2	960	47	97	...	Cum., Str., & Cum str.	
Mean.	E <sup>1</sup> / <sub>2</sub> S.	3		3	30.039	75.6	71.8	80	76.4	8			

THURSDAY, 23<sup>d</sup> MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	3	cpd	3	30.046	74.8	71.3	81	76.0	9	...	Cm.&Str.	At noon, lat. 17° 26' s. long. 13° 52' w. Temperature by self-registering thermo- meter, max. 80° 2, min. 73° 0. Current, s. 83° w. 8'.
4.	E.	4	e	...	30.000	75.3	71.3	79	76.0	9	...	Str.	
6.	E.	4	e	...	30.018	75.3	71.8	81	76.0	10	...	Cum.	
8.	Ebs.	4	e	...	30.036	75.8	71.8	79	76.0	10	...	Cm.&Str.	
10.	Ebs.	5	orq	...	30.074	76.8	72.8	79	76.0	10	...	Cas.&Cb	1 a.m., observed a brilliant meteor.
Noon.	E.S.E.	4	bc	4	30.051	79.8	72.8	67	76.0	6	...	Cm.&Str.	
2.	Ebs.	4	e	3	30.009	77.3	72.3	75	76.5	10	...	Cum.	
4.	Ebs.	3	bc	...	29.994	76.3	71.8	77	76.5	8	...	Cir cum.	
6.	Ebs.	4	bc	...	29.998	76.0	70.8	74	76.0	4	...	Cum.	Sp. gr. 1.02768.  Wind unsteady at midnight.
8.	Ebs.	3	bc	...	29.990	75.8	71.8	79	76.5	8	...	Cum.	
10.	E.	5	orq	...	30.013	76.3	71.8	77	76.0	10	...	Cm.&Str.	
Midd.	E.	3	orq	3	30.014	75.8	69.8	71	76.0	10	...	Cm.&Str.	
Totals.	...	46	...	13	252	75.3	71.1	79	15	104	...	Cum., Str., & Nimb.	
Mean.	Ebs.	4	cpd	3	30.021	76.3	71.7	77	76.1	9	...	Cir cum.	

FRIDAY, 24<sup>th</sup>.

2.	Ebs.	3	oe	3	29.971	75.3	70.3	74	76.5	10	...	Cm.&Str.	At noon, lat. 14° 49' s. long. 13° 42' w. Temperature by self-registering thermo- meter, max. 80° 2, min. 74° 0. Current, s. 81° w. 19'.
4.	Ebs.	5	orq	...	29.953	75.8	71.8	79	76.0	10	...	Cm.&Str.	
6.	Ebs.	4	cap	3	29.954	75.3	71.3	79	76.0	9	...	Cm.&Cumst	
8.	Ebs.	5	bcq	4	29.982	76.0	71.8	78	76.5	9	...	Cm.&Cumst	
10.	E.	4	bc	4	29.983	78.5	73.0	73	77.0	8	...	Cum.&Cum	Flying fish seen. Sp. gr. 1.02763.
Noon.	E.	4	bc	...	29.961	77.8	73.5	78	77.2	8	...	Cum.	
2.	E.S.E.	3	bc	...	29.937	77.8	72.8	75	77.5	3	...	Cir.	
4.	E.S.E.	4	bc	5	29.913	77.8	72.3	73	77.2	7	...	Cir.	
6.	Ebs.	4	bc	3	29.921	77.0	71.8	74	...	3	...	Cir str.	...
8.	Ebs.	4	bc	3	29.942	76.5	71.8	76	77.5	2	...	Cum.	
10.	Ebs.	4	bc	...	29.955	76.5	71.5	75	77.5	4	...	Cum.	
Midd.	Ebs.	4	bc	...	29.930	76.5	71.5	75	77.7	5	...	Cum.	
Totals.	...	48	bcqp	25	11411	80.8	23.4	69	76.6	78	...	Cum., Str., & Cum str.	
Mean.	Ebs.	4	bcqp	4	29.951	76.7	71.9	76	76.9	7	...	Cir.	

SATURDAY, 25<sup>th</sup>.

2.	Ebs.	4	bc	3	29.899	75.8	70.8	75	77.5	3	...	Cum.	At noon, lat. 12° 29' s. long. 13° 44' w. Temperature by self-registering thermo- meter, max. 80°, min. 74° 7. Current, s. 72° w. 15'.
4.	E.	5	bc	...	29.850	76.3	72.5	80	77.5	6	...	Cum.	
6.	Ebs.	4	bc	...	29.869	76.8	71.8	75	78.2	8	...	Cum.	
8.	Ebs.	4	bc	3	29.916	77.8	70.3	65	78.5	9	...	Cm.&Str.	
10.	Ebs.	3	bc	2	29.946	77.8	71.8	71	78.5	5	...	Cm.&Str.	Sp. gr. 1.02722.
Noon.	Ebs.	3	bc	3	29.919	78.3	71.8	69	78.7	6	...	Cm.&Str.	
2.	E.S.E.	3	bc	...	29.856	78.3	73.0	74	79.0	7	...	Cm.&Str.	
4.	E.S.E.	3	bc	...	29.850	78.8	73.5	74	79.0	7	...	Cum.	
6.	E.S.E.	4	bc	3	29.856	77.8	72.5	74	78.5	6	...	Cir.	...
8.	Ebs.	4	bc	3	29.884	77.3	72.3	75	78.5	1	...	Cum.	
10.	Ebs.	3	bc	...	29.894	77.8	73.8	79	78.5	4	...	Cum.	
Midd.	Ebs.	5	bc	...	29.888	77.3	73.3	79	78.5	2	...	Cum.	
Totals.	...	45	bc	20	10627	90.1	27.4	890	100.9	64	...	Cir.	Cum. & Str.
Mean.	Ebs.	4	bc	3	29.886	77.5	72.3	74	78.4	5	...	Cir.	

## SUNDAY, 26TH MARCH 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32 and Sea-Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 16.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	E.S.E.	4	bc	...	29.843	77.5	74.0	81	79.0	4	...	Cum.	At noon, lat. 10° 6' S. long. 13° 44' W. Temperature by self-registering thermometer, max. 81.2, min. 76. Current, S. 60° W. 14.
4.	E.S.E.	3	bc	...	29.815	77.3	74.0	83	79.0	3	...	Cum.	
6.	E.S.E.	4	bc	...	29.856	77.3	74.3	84	79.5	3	...	Cir.&Str.	
8.	E.S.E.	3	bc	...	29.919	79.0	74.8	79	79.5	4	...	Cum.	
10.	E.S.E.	4	bc	...	29.919	79.5	75.8	81	79.0	5	...	Cum.	Sp. gr. 1.02732. One gamet seen.
Noon.	E.S.E.	4	bc	3	29.879	79.5	75.8	82	80.0	5	...	Cum.	
2.	E.S.E.	4	bc	3	29.826	79.8	76.3	83	80.0	4	Cir.	Cum.	
4.	E.S.E.	4	bc	3	29.807	80.8	76.8	80	80.0	3	Cir.	Cum.	
6.	E.S.E.	4	bc	...	29.857	79.8	76.3	82	80.0	4	Cir str.	Cum.	
8.	E.S.E.	3	bc	2	29.882	79.3	76.3	85	80.0	3	...	Cum.	
10.	E.S.E.	4	bc	...	29.902	78.8	76.3	88	80.0	...	...	Cum.	
Midt.	E.	4	bc	...	29.891	78.8	76.3	88	80.0	...	...	Cum.	
Totals.	...	45	bc	11	10357	107.4	67.0	36	115.5	45	Cir. & Cir str.	Cum.	
Mean.	E.S.E.	4		3	29.863	78.9	75.6	83	79.6	4			

## MONDAY, 27TH.

2.	E.	3	bcl	...	29.843	79.3	76.8	88	80.0	4	...	Cum.	At noon, lat. 8° 3' S. long. 14° 27' W.
4.	E.	2	bcl	...	29.743	79.3	75.8	83	80.0	3	...	Cum.	
6.	E.S.	2	bc	...	29.856	78.8	76.8	90	...	6	Cir str.	Cum.	
8.	S.E.	2	bcp	...	29.886	78.8	76.8	90	80.0	9	Cir.	Cum.	
10.	swb.w.	5	opr	...	29.909	76.3	74.8	91	80.0	10	...	Cir.&Xb.	9.30 A.M., wind shifted from S.E. to swb.w. suddenly in a squall with heavy rain. Sp. gr. 1.02700. 5 P.M., arrived at Ascension.
Noon.	S.	2	opr	...	29.810	76.3	74.8	91	...	10	...	Cir.&Xb.	
2.	S.S.E.	3	bc	...	29.850	78.8	75.8	85	80.0	7	Cir.	Cum.	
4.	S.S.E.	2	bc	...	29.855	78.3	75.8	87	80.0	5	Cir.	Cum.	
6.	S.S.E.	2	bc	...	29.857	79.8	76.0	81	80.0	4	Cir.	Cum.	
8.	S.S.E.	2	bc	...	29.876	77.3	74.5	85	...	2	...	Cum.	
10.	E.	2	bc	...	29.913	77.8	75.8	89	...	4	Str.	Cum.	
Midt.	E.S.E.	2	bc	...	29.905	77.8	75.8	89	...	3	...	Cum.	
Totals.	...	29	bcp	...	10359	98.6	69.5	89	...	67	Cir. & Cir str.	Cum. & Nimb.	
Mean.	Variable.	2			29.863	78.2	75.8	87	80.0	6			

## TUESDAY, 28TH.

2.	E.S.E.	1	bc	...	29.845	78.3	75.8	87	...	5	...	Cum.	At Ascension island.
4.	E.S.E.	1	bc	...	29.835	77.8	75.8	89	...	4	...	Cum.	
6.	S.E.	1	bc	...	29.865	78.8	75.8	85	81.0	6	...	Cum.	
8.	S.E.	1	bc	...	29.887	80.0	76.5	83	...	5	Cir cum.	Cum.	
10.	S.E.	2	bc	...	29.902	83.8	77.8	72	...	5	Cir.	Cum.	
Noon.	E.S.E.	3	bc	...	29.892	84.8	78.3	70	...	5	...	Cum.	
2.	E.S.E.	4	bc	...	29.835	84.3	77.8	70	...	6	Cir str.	Cum.	
4.	E.S.E.	3	bc	...	29.838	83.8	77.8	72	...	7	Cir str.	Cum.	
6.	E.S.E.	2	bc	...	29.860	82.3	77.3	76	81.2	6	Cir str.	Cum.	
8.	E.S.E.	2	b	...	29.877	80.8	76.8	80	...	0	...	...	
10.	E.S.E.	1	bl	...	29.922	80.0	76.3	81	...	0	...	...	
Midt.	E.S.E.	2	bcl	...	29.921	80.0	76.5	83	...	2	...	Cum.	
Totals.	...	23	bcl	...	10479	14.7	82.5	948	...	51	Cir str.	Cum.	
Mean.	S.E.	2		...	29.873	81.2	76.9	79	81.1	4			

## WEDNESDAY, 29TH MARCH 1876.

Hour	Win L.		Weather.	State of Sea, 0 to 5	Barometer (re- duced to 0-2° and Sea-Level).	Thermometer				Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force				Dry Bulb.	Damp Bulb.	Upper.	Lower.						
2.	Calm.	0	bc	...	29.881	79.3	75.8	83	...	...	2	...	Cum.	At Ascension island. Temperature by self-registering thermo- meter, max. 87°, min. 74°.	
4.	Calm.	0	bc	...	29.862	78.8	75.3	83	...	...	1	...	Cum.		
6.	E.S.E.	1	bc	...	29.874	78.8	75.3	83	80.5	...	3	Cir.	Cum.		
8.	E.S.	1	bc	...	29.882	81.3	76.8	78	...	...	3	...	Cum.		
10.	E.S.E.	3	bc	...	29.908	84.3	77.8	70	...	...	3	Cir.	Cum.		
Noon.	E.S.E.	1	bc	...	29.909	85.8	78.8	68	...	...	5	...	Cum.		
2.	E.S.E.	2	bc	...	29.881	83.8	77.5	71	...	...	6	Cir cum.	Cum.		
4.	E.S.E.	1	bc	...	29.878	83.3	76.5	69	...	...	5	...	Cum.		
6.	E.S.E.	1	bcp	...	29.886	81.3	74.3	68	81.5	...	6	...	Cum.		
8.	E.S.E.	1	b	...	29.904	80.3	76.3	80	...	...	0	...	...		
10.	E.S.E.	1	b	...	29.937	79.8	75.8	80	...	...	0	...	...		
Midd.	E.S.E.	1	b	...	29.940	79.8	75.8	80	...	...	0	...	...		
Totals.				...	13	bcp	16736	16.6	76.0	913	...	34	Cir.	Cum.	
Mean.				E.S.E.	1		...	29.895	81.4	76.3	76	81.0			

## THURSDAY, 30TH.

2.	Calm.	0	b	...	29.893	78.5	75.5	84	...	0	...	...	At Ascension island. Temperature by self-registering thermo- meter, max. 85°, min. 76° 5.
4.	Calm.	0	b	...	29.889	78.5	75.5	84	...	0	...	...	
6.	S.E.S.	1	bc	...	29.913	77.8	74.8	84	81.0	2	...	Cum.	
8.	E.S.E.	2	bc	...	29.914	79.8	75.8	80	...	2	...	Cum.	
10.	E.S.E.	2	bc	...	29.960	82.3	77.8	78	...	4	Cir.	Cum.	
Noon.	E.S.E.	2	bc	...	29.930	82.3	77.3	76	...	4	Cir.	Cum.	
2.	W.S.W.	1	bc	...	29.889	83.3	78.3	76	...	3	Cir.	Cum.	
4.	S.E.E.	1	bc	...	29.874	82.3	76.3	72	...	2	Cir.	Cum.	
6.	S.S.E.	2	bc	...	29.886	81.5	77.0	78	81.7	4	Str.	Cum.	
8.	E.S.E.	2	bc	...	29.875	80.8	76.8	80	...	4	Str.	Cum.	
10.	E.S.E.	1	bc	...	29.912	78.8	75.8	85	...	2	...	Cum.	
Midd.	E.S.E.	1	b	...	29.934	78.8	75.8	85	...	0	...	...	
Totals.		...	15	...	16849	4.7	76.7	2	...	27	Cir. & Str.	Cum.	
Mean, Variable.		1	...	...	29.904	80.4	76.4	80	81.3	2			

## FRIDAY, 31st.

2.	Calm.	0	b	...	29.915	78.0	76.3	90	...	0	...	...	At Ascension island. Temperature by self-registering thermo- meter, min. 76° 2.
4.	E.S.E.	1	b	...	29.899	77.8	74.8	84	...	0	...	...	
6.	S.S.E.	1	bc	...	29.909	78.0	76.0	89	81.2	5	...	Cum.	
8.	S.S.E.	3	bc	...	29.943	80.3	76.8	83	...	4	Cir str.	Cum.	
10.	S.S.E.	3	bc	...	29.950	82.8	77.8	76	...	4	...	Str. & Cum.	
Noon.	S.S.E.	3	bc	...	29.924	82.8	77.8	76	...	5	...	Cum.	
2.	S.S.W.	3	bc	...	29.892	81.3	76.8	78	...	6	Cir str.	Cum.	
4.	S.S.W.	2	bc	...	29.873	80.8	76.3	78	...	6	Str.	Cum.	
6.	S.S.E.	1	bc	...	29.881	81.3	76.0	75	81.0	5	Str.	Cum.	
8.	S.S.E.	1	bc	...	29.907	79.8	75.5	79	...	1	...	Cum.	
10.	S.S.E.	1	bc	...	29.951	79.5	75.3	79	...	2	Str.	Cum.	
Midd.	Variable.	1	bc	...	29.952	78.5	74.8	80	...	1	Str.	Cum.	
Totals.	...	20	bc	...	16996	0.9	74.2	967	...	39	Str. & Cir str.	Cum.	
Mean.	S.S.E.	2		...	29.916	80.1	76.2	81	81.1	3			

## SATURDAY, 1ST APRIL 1876.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.S.E.	1	b	...	29.915	77.8	74.8	84	...	0	...	...	At Ascension island. Temperature by self-registering thermo- meter, max. 84°, min. 76°.
4.	E.S.E.	1	b	...	29.885	77.3	74.3	84	...	0	...	...	
6.	S.S.E.	1	bc	...	29.898	77.3	74.0	83	81.0	2	...	Cum.	
8.	S.S.E.	1	bc	...	29.927	80.0	75.5	78	...	3	Cir.	Cum.	
10.	S.S.W.	2	bc	...	29.940	80.5	76.0	78	...	6	...	Cum.	
Noon.	S.S.E.	1	bc	...	29.914	81.8	76.0	73	...	6	...	Cum.	
2.	S.S.W.	3	bc	...	29.861	81.8	76.5	75	...	4	...	Cum.	
4.	S.S.W.	3	bc	...	29.851	82.8	76.3	70	...	4	...	Cum.	
6.	S.S.W.	2	bc	...	29.882	81.3	75.8	74	81.7	4	...	Cum.	
8.	S.S.E.	1	b	...	29.907	79.8	75.8	80	...	0	...	...	
10.	S.S.E.	1	bc	...	29.946	79.5	74.8	77	...	2	...	Cum.	
Midt.	S.S.E.	1	bc	...	29.941	78.8	74.5	77	...	1	...	Cum.	
Totals.	...	18	...	...	10867	1187	64.3	93	...	32	Cir.	Cum.	
Mean.	S <sup>1</sup> E <sup>1</sup> E.	1	bc	...	29.906	79.9	75.4	78	81.3	3	Cir.	Cum.	

## SUNDAY, 2d.

2.	E.S.E.	1	bc	...	29.902	77.8	73.8	79	...	1	...	Cum.	At Ascension island. Temperature by self-registering thermo- meter, max. 82° 5', min. 75° 5'.
4.	Calm.	0	b	...	29.906	77.8	74.0	89	...	0	...	...	
6.	E.N.E.	1	bc	...	29.922	77.3	74.3	84	81.0	1	...	Cum.	
8.	E.S.E.	1	bc	...	29.916	80.3	75.8	78	...	2	...	Cum.	
10.	S.S.E.	2	bc	...	29.948	81.8	75.8	72	...	5	...	Cum.	
Noon.	E.S.E.	2	bc	...	29.913	81.8	75.8	72	...	4	Cir.	Cum.	
2.	E.S.E.	1	bc	...	29.863	82.3	76.5	72	...	4	...	Cum.	
4.	S.S.E.	2	bc	...	29.870	82.6	75.5	70	...	6	...	Cum str.	
6.	E.S.E.	1	bc	...	29.892	80.8	75.8	76	81.5	7	...	Cum str.	
8.	E.S.E.	1	bc	...	29.940	79.8	75.3	78	...	1	...	Cum.	
10.	E.S.E.	1	bc	...	29.936	79.3	75.3	80	...	2	...	Cum.	
Midt.	E.S.E.	1	bc	...	29.931	78.8	75.0	81	...	5	...	Cum.	
Totals.	...	14	bc	...	10959	119.8	62.7	82	...	38	Cir.	Cum. & Cum str.	
Mean.	E.S.E.	1	bc	...	29.912	80.0	75.2	77	81.2	3	Cir.	Cum.	

## MONDAY, 3d.

2.	E.S.E.	1	b	...	29.899	78.5	74.5	79	...	0	...	...	At noon, lat. 7° 54' S. long. 14° 29' W. Temperature by self-registering thermo- meter, max. 83° 5', min. 75° 2'.  6 A.M., left Ascension island. Sp. gr. 1.02672.
4.	E.S.E.	1	b	...	29.893	78.0	74.5	81	...	0	...	...	
6.	Calm.	0	bc	...	29.918	77.8	74.0	80	...	2	...	Cum.	
8.	S.S.E.	1	bc	2	29.945	80.8	76.3	78	81.0	3	Cir.	Cum.	
10.	S.S.E.	2	bc	...	29.965	81.8	75.8	72	81.5	2	...	Cum.	
Noon.	S.S.E.	4	bc	...	29.941	81.8	76.8	76	81.5	3	...	Cum.	
2.	S <sup>1</sup> E.	2	bc	...	29.903	81.8	76.3	74	81.7	4	Cir.	Cum.	
4.	E.	2	bc	...	29.881	81.3	76.8	78	82.0	1	...	Sm. cum.	
6.	E <sup>1</sup> S.	2	bc	...	29.906	80.8	76.8	80	82.0	3	...	Sm. cum.	
8.	E.	2	bc	...	29.929	80.8	76.5	79	81.7	3	...	Cum.	
10.	E.	4	bc	...	29.961	80.8	77.3	83	81.7	6	...	Cum.	
Midt.	E <sup>1</sup> N.	3	bepd	2	29.943	81.8	75.8	72	81.7	7	...	Cum.	
Totals.	...	24	bepd	4	11084	6.0	71.4	932	14.8	34	Cir.	Cum.	
Mean.	SE <sup>1</sup> E <sup>1</sup> E.	2	bepd	2	29.924	80.5	75.9	78	81.6	3	Cir.	Cum.	

## TUESDAY, 4TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometre cor- rected to 32° and Sea Level.	Thermometer		Humidity, Sat. - 100.	Temperature of Sea Surface.	Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.	3	bc	...	29.992	80.8	76.8	80	81.0	5	...	Cum.	At noon, lat. 5° 59' s. long. 14° 25' w. Temperature by self-registering thermo- meter, max. 84°, min. 79°. Current, s. 38° w. 11'.  A large flock of wideawakes going to E. Sp. gr. 1.02648.
4.	E.	2	bc	...	29.994	80.3	76.8	83	81.0	7	...	Cum.	
6.	E.S.	1	bc	...	29.992	80.3	76.8	83	82.5	4	Cir.	Cum.	
8.	E.	3	bc	...	29.992	81.8	77.8	80	82.0	...	Cir.	Cum.	
10.	E.	3	bc	...	29.999	81.8	77.8	80	82.5	5	...	Cum.	
Noon.	E.	3	bc	...	29.947	81.8	77.8	78	82.5	5	...	Cum.	
2.	E.	4	bc	...	29.860	82.8	77.8	76	82.5	6	...	Cum.	
4.	E.S.	4	bc	...	29.848	82.8	77.8	74	82.5	5	Cir str.	Cum.	
6.	E.S.E.	3	bc	...	29.884	81.8	77.8	80	...	4	Cir str.	Cum.	
8.	E.S.	3	bc	...	29.902	81.8	77.8	80	82.0	4	...	Cum.	
10.	E.	3	bc	...	29.948	81.8	76.8	76	82.0	8	Cir.	Cum.	
Midt.	E.	2	bc	...	29.957	81.8	77.8	80	82.0	4	...	Cum.	
Totals.	...	32	bc	4	10955	19.6	88.6	950	22.5	57	Cir. & Cir str.	Cum.	
Mean.	E.S.	3		2	29.913	81.6	77.4	79	82.0	5			

## WEDNESDAY, 5TH.

2.	E.	3	bcp	2	29.871	80.8	77.8	85	82.0	6	...	Cum.	At noon, lat. 4° 10' S., long. 14° 34' W. Temperature by self-registering thermo- meter, max. 82° 7', min. 78° 0'. Current, s. 63° W. 22'. Flying fish seen. Sp. gr. 1.02616. 11.15 P.M., the wind fell calm for half an hour.
4.	E.	4	bc	2	29.871	81.8	76.8	76	82.0	5	...	Cum.	
6.	E.S.	1	bcp	...	29.890	80.0	77.8	89	...	6	...	Cum. & Cumst.	
8.	E.S.	3	bc	1	29.916	81.8	77.8	80	82.2	3	...	Cum.	
10.	E.S.	3	bc	...	29.918	82.0	78.3	82	82.2	4	...	Cum.	
Noon.	E.S.	3	bc	...	29.892	82.3	78.3	80	82.5	5	...	Cir.	
2.	E.	3	bc	...	29.859	82.3	78.3	89	82.5	5	...	Cum.	
4.	E.S.	3	bc	2	29.827	81.8	78.3	83	82.5	5	...	Cum.	
6.	E.S.	3	bc	...	29.848	81.8	78.3	83	82.5	4	...	Cum.	
8.	E.	3	bc	2	29.878	81.8	77.8	80	82.2	4	...	Cum. & Cumst.	
10.	E.S.	3	bc	...	29.894	81.8	78.5	84	82.2	7	...	Cum str.	
Midt.	E.S.	2	cpl	...	29.882	76.8	76.8	100	82.2	10	...	Cum. & Nimb.	
Totals.	...	33	bcp	9	10546	15.0	94.8	1002	25.0	64	Cir.	Cum. & Cum. str.	
Mean.	E.S.	3		2	29.879	81.2	77.9	84	82.3	5			

## THURSDAY, 6TH.

2.	Variable.	0	cqpr	...	29.842	76.0	75.8	99	81.5	10	...	Nimb.	At noon, lat. 2° 42' S., long. 14° 41' W. Temperature by self-registering thermo- meter, max. 84° 8', min. 75° 0'. Current, s. 72° W. 29'. Midnight to 2 A.M., wind variable with squalls and calms and heavy rain. Sp. gr. 1.02642. 10 A.M., a heavy shower passed about 2 miles from the ship. 1 P.M., heavy rain squall.
4.	E.S.	3	bc	...	29.823	79.8	76.8	85	81.5	5	...	Cum.	
6.	E.S.	3	bc	...	29.847	80.0	77.8	89	...	5	...	Cum.	
8.	E.S.	4	bc	3	29.913	80.3	77.8	88	82.0	5	...	Cum.	
10.	E.S.	2	bcp	3	29.920	80.8	77.8	85	82.0	7	...	Cum. & Nimb.	
Noon.	E.S.	3	bc	2	29.899	82.3	79.3	85	82.0	5	...	Cir.	
2.	E.	2	bcp	1	29.861	80.8	78.3	88	82.0	6	...	Cum.	
4.	E.S.	3	bc	...	29.841	82.0	78.3	81	82.0	6	...	Cir.	
6.	E.S.	2	bc	...	29.876	81.8	77.8	80	82.0	5	...	Cir str.	
8.	E.	2	bc	1	29.901	80.8	76.8	80	82.0	6	...	Cir str.	
10.	E.	2	bc	...	29.935	80.3	78.3	90	82.0	6	...	Cum str.	
Midt.	E.	2	bc	...	29.928	80.8	78.8	90	82.0	6	...	Cum str.	
Totals.	...	28	bcp	10	10586	5.7	93.6	80	21.0	72	Cir. & Cir str.	Cum., Cum str., & Nimb.	
Mean.	E.S.	2		2	29.882	80.5	77.8	87	81.9	6			

## FRIDAY, 7TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E <sup>N</sup> .	2	bc	...	29.874	80.8	78.5	89	82.0	6	...	Cum.	At noon, lat. 0° 35' S. long. 14° 29' W. Temperature by self-registering thermo- meter, max. 85°, min. 79°. Current, S. 57° W. 21'.
4.	E <sup>N</sup> .	1	bc	...	29.868	80.8	78.3	88	81.7	6	...	Cum.	
6.	E <sup>N</sup> .	2	bc	...	29.890	79.5	78.0	93	81.7	5	Cr.	Cum.	
8.	E.	2	bc	...	29.922	81.3	79.0	88	81.7	4	Cr.	Cum.	
10.	E.	2	bc	...	29.941	81.8	79.3	87	81.7	4	...	Cum.	Rain from 6 A.M., 6th, to 6 P.M., 7th. 0.02 inch. Sp. gr. 1.02657.
Noon.	E <sup>S</sup> .	3	bc	...	29.910	81.8	78.8	85	81.7	4	Cr.	Cum.	
2.	E.	2	bc	...	29.880	81.8	78.3	83	82.0	2	...	Cum.	
4.	E.	2	bc	...	29.880	83.8	80.3	83	82.0	2	...	Cum.	
6.	E. S. E.	2	bc	...	29.886	82.8	79.3	83	82.0	3	Cr.	Cum.	
8.	S. E.	1	bc	...	29.908	81.0	79.0	90	81.5	3	Cr.	Cum.	
10.	E. S. E.	3	bc	...	29.928	81.0	79.0	90	81.5	4	...	Cum.	
Midt.	E.	2	bc	...	29.928	80.8	78.8	90	81.2	5	...	Cum.	
Totals.	...	24		...	10815	17.2	106.6	89	20.7	48			
Mean.	E <sup>S</sup> .	2	bc	...	29.901	81.4	78.9	87	81.7	4	Cr.	Cum.	

## SATURDAY, 8TH.

2.	E.	2	bc	...	29.883	77.8	76.8	94	81.5	5	...	Cum str.	At noon, lat. 1° 30' S. long. 14° 6' W. Temperature by self-registering thermo- meter, max. 82°, min. 74°. Current, S. 69° W. 9'. 6 A.M., rain 0.18 inch.
4.	E. S. E.	2	bc	...	29.872	79.8	77.8	90	81.5	5	...	Cum str.	
6.	N <sup>E</sup> .	2	ed	...	29.876	77.8	77.8	100	81.5	10	...	Cum str.	
8.	N <sup>E</sup> .	2	bc	...	29.918	77.8	76.8	94	81.7	9	...	Cum str.	
10.	E <sup>N</sup> .	1	bc	...	29.945	80.8	77.8	85	82.0	7	Cr. & Crst.	Cum.	3 P.M. weather cleared. Sp. gr. 1.02627.
Noon.	E <sup>N</sup> .	2	bc	...	29.931	81.8	78.5	84	82.5	8	Cr.	Cum.	
2.	E <sup>N</sup> .	5	or	...	29.882	74.8	74.8	100	82.5	10	...	Cum str.	
4.	S. E.	1	ocr	...	29.834	77.0	76.8	99	...	10	Cr str.	Cum.	
6.	S. S. E.	1	c	...	29.860	78.0	76.0	89	81.7	10	...	Cm. & Str.	Upper clouds from S. E. and S. 1.
8.	S. S. E.	1	c	...	29.876	78.8	77.5	94	82.2	10	...	Cm. & No	
10.	Calu.	0	bc	...	29.900	77.8	76.5	93	82.5	4	Cr.	Cum.	
Midt.	E. S. E.	1	bc	...	29.901	78.8	76.3	88	82.7	3	Cr.	Cum.	
Totals.	...	20	bc	...	10678	191.0	83.4	111.0	22.3	91	Cr. & Cr str.	Cum., Str., & Cum str.	
Mean.	E <sup>S</sup> .	2	bc	...	29.890	78.4	76.9	92	82.0	8			

## SUNDAY, 9TH.

2.	E. S. E.	1	bc	1	29.861	78.8	76.8	90	83.0	3	Cr cum.	...	At noon, lat. 3° 10' S. long. 14° 51' W. Temperature by self-registering thermo- meter, max. 86° 7', min. 76° 8'. Current, S. 39° W. 6'. Rain to 6 A.M., 0.3 inch. Sp. gr. 1.02602. A few flying fish. 6.50 P.M., heavy shower passed about a mile from ship.
4.	Calu.	0	bc	...	29.855	79.3	76.8	88	83.2	5	Cr cum.	Cum.	
6.	E.	1	bc	...	29.865	79.3	77.3	90	83.5	2	Cr cum.	Cum.	
8.	S. S. E.	1	bc	...	29.895	81.3	78.8	88	83.5	1	Cr.	Cum.	
10.	S. S. E.	1	bc	...	29.913	84.8	80.3	78	84.0	4	...	Cum.	
Noon.	S. S. E.	2	bc	...	29.898	84.8	80.5	79	84.7	3	Cr.	Cum.	
2.	S.	1	bc	...	29.856	84.8	80.5	79	85.0	3	Cr.	Cum.	
4.	S.	1	bc	...	29.853	85.5	80.8	77	85.5	3	Cr.	Cum.	
6.	Variable.	0	bc	...	29.859	84.8	79.8	76	85.0	4	...	Cm. & Nb.	
8.	Variable.	1	bc	...	29.893	82.3	79.8	88	81.5	4	Cr.	Nmb.	
10.	Variable.	0	bc	...	29.919	79.5	76.8	86	81.7	10	...	Cm. & Nb.	
Midt.	Variable.	1	bc	...	29.901	80.0	78.5	93	81.7	5	...	Cum.	
Totals.	...	10	bc	...	10566	25.2	106.7	101.2	51.3	47	Cr. & Cr cum.	Cum. & Nmb.	
Mean.	S. E.	1	bc	1	29.881	82.1	78.9	84	84.3	4			

## MONDAY, 10TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer reduced to 32° and Sea-Level.	Temperature.		Humidity, Sat. 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	Time Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	Calm.	0	bc	...	29.862	80.8	79.3	93	84.5	5	Cir.	Cum.	At noon, lat. 5° 23' S. long. 14° 49' W. Temperature by self-registering thermometer, max. 85°, min. 78° 5.
4.	Calm.	0	bc	...	29.866	81.5	78.8	87	84.0	6	Cir.	Cum.	
6.	Calm.	0	c	...	29.855	81.8	78.8	85	84.2	10	...	Cum.	Current, S. 62° E. 7.
8.	N. N. W.	1	c	...	29.903	82.3	78.8	83	84.0	10	...	Cum. & Nb.	
10.	F.	4	eq	...	29.945	80.3	78.3	90	84.0	10	...	Str. & Nb.	2.50 A.M. in a heavy rain squall, which passed, observed a brilliant streak as of a falling meteor, followed by thunder and sheet lightning.
Noon.	S. E.	2	c	...	29.927	80.3	76.8	83	84.2	10	...	Str.	
2.	S. E.	1	bc	...	29.870	82.8	78.8	80	84.0	8	...	Cum.	5 A.M., observed a waterspout forming. 6 A.M., rain 0.225 inch.
4.	Calm.	0	bc	...	29.861	84.0	79.8	79	84.0	8	Cir.	Cum.	
6.	Calm.	0	bc	...	29.882	82.8	79.3	83	84.0	8	Cir. & Cum.	Str. & Cum.	Sp. gr. 1.02636.
8.	N. N. W.	1	bc	...	29.915	82.8	79.3	83	84.0	7	...	Cum. & Nb.	
10.	N. N. W.	1	bc	...	29.903	82.3	78.8	83	83.7	5	...	Cum. & Nb.	...
Midd.	Calm.	0	bc	...	29.902	81.8	78.8	85	83.9	...	...	...	
Totals.	...	10	bc	...	19670	23.5	16.6	1014	47.6	87	Cir. & Cir cum.	Cum., Str. & Nimb.	
Mean. Variable.	1			...	29.889	81.9	78.8	84	84.0	8			

## TUESDAY, 11TH.

2.	swby.	1	bc	...	29.862	81.5	78.8	86	82.7	7	...	Cum.	At noon, lat. 7° 26' S. long. 15° 13' W. Temperature by self-registering thermometer, max. 87°, min. 79° 5.
4.	swby.	2	bc	...	29.848	81.0	78.5	88	82.5	5	Cir.	Cum.	
6.	swby.	1	bc	...	29.884	80.8	78.3	88	82.7	5	Cir cum.	Cum.	Current, S. 62° E. 8.
8.	swby.	2	bc	...	29.912	81.3	77.8	83	82.7	7	Cir.	Cum.	
10.	swby.	1	bc	...	29.958	83.3	79.0	79	82.0	7	...	Cum.	Sp. gr. 1.02640.
Noon.	wby.	2	bc	...	29.937	84.3	79.8	78	84.2	5	...	Cum.	
2.	W. N. W.	1	bc	...	29.879	84.8	79.8	76	84.0	7	...	Cum.	Sheet lightning to S.W.
4.	N. W.	1	hem	...	29.874	84.5	79.8	77	84.5	5	...	Cum.	
6.	swby.	1	hem	...	29.888	82.8	78.8	80	84.0	4	Cir str.	Cum.	...
8.	swby.	1	bc	...	29.913	81.8	78.3	83	83.5	3	Str.	Cum.	
10.	wby.	2	bc	...	29.935	81.3	77.8	83	83.0	5	...	Cum str.	...
Midd.	wby.	2	bc	...	29.935	82.3	77.8	78	83.0	2	Cir cum.	...	
Totals.	...	17	bc	...	19823	20.7	104.5	979	38.8	62	Cir., Cir cum., & Cir str.	Cum.	
Mean. swby.	1			...	29.902	82.5	78.7	82	83.2	5			

## WEDNESDAY, 12TH.

2.	swbw.	1	bc	...	29.880	80.8	79.3	93	83.0	1	Cir.	...	At noon, lat. 9° 3' S. long. 16° 35' W. Temperature by self-registering thermometer, max. 85°, min. 78° 2.
4.	swbw.	1	bc	...	29.869	80.3	76.3	80	83.0	0	...	...	
6.	W. N. W.	2	hem	...	29.879	79.8	76.3	83	82.7	2	Cir.	...	Current, S. 5.
8.	N. W.	1	bc	...	29.912	80.8	75.8	76	81.7	1	Cir.	...	
10.	N. W.	1	bc	...	29.910	83.5	77.8	73	81.7	2	...	Cum str.	One or two tern. several Portuguese men-of-war, and one stormy petrel seen.
Noon.	N. W.	1	bc	2	29.891	82.5	77.8	77	81.7	2	...	Cum str.	
2.	swbw.	2	bc	...	29.869	82.8	77.3	74	81.7	1	...	Cum.	Sp. gr. 1.02671.
4.	W.	2	bc	...	29.834	82.8	76.3	70	81.7	4	...	Cum str.	
6.	W. N. W.	1	hem	...	29.855	80.8	76.8	80	80.0	1	Cir.	...	...
8.	swbw.	1	bc	...	29.861	79.5	76.5	85	79.5	3	Cir.	...	
10.	wby.	1	bc	1	29.918	78.3	75.8	87	79.0	3	Cir str.	Cum.	...
Midd.	wby.	2	bc	...	29.899	77.8	75.8	89	79.0	2	...	Cum.	
Totals.	...	16	hem	3	10568	9.7	81.8	967	14.7	22	Cir. & Cir str.	Cum. & Cum str.	
Mean. W. N. W.	1			1	29.881	80.8	76.8	81	81.2	2			

## THURSDAY, 13TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	w <sup>b</sup> N.	3	bc	...	29.859	77.3	74.8	87	79.0	4	...	Cum. & Cir.	At noon, lat. 10° 48' N. long. 17° 45' W. Temperature by self-registering thermo- meter, max. 78° 5, min. 73° 5. Current, N. 70° E. 3'. 6 A.M., observed current rippings. Flying fish and gannet seen.
4.	w. N. W.	2	bc	...	29.855	76.8	73.8	84	78.2	6	...	Cum. & Str.	
6.	w.	1	bcm	...	29.884	75.8	74.2	91	78.0	4	Cir.	Cum.	
8.	w. N. W.	1	bc	...	29.892	76.8	74.8	89	78.2	3	...	Cum.	
10.	N. N. W.	2	bc	...	29.915	76.8	73.5	83	79.0	2	...	Cum.	
Noon.	s <sup>b</sup> W.	3	bm	...	29.898	76.8	73.8	84	78.5	0	...	...	
2.	s <sup>b</sup> W.	3	bc	...	29.857	77.0	73.3	80	77.7	2	Cir str.	...	
4.	N. N. W.	4	bc	...	29.828	75.3	71.8	82	77.7	3	Cir str.	...	
6.	N. N. W.	5	bm	2	29.841	74.8	71.8	84	76.5	0	...	...	
8.	s <sup>b</sup> W.	5	bm	...	29.858	73.8	70.8	84	76.2	0	...	...	
10.	s <sup>b</sup> W.	5	bm	...	29.884	73.5	70.5	84	76.0	0	...	...	
Midt.	s <sup>b</sup> W.	5	bm	...	29.864	72.8	70.0	85	74.7	0	...	...	
Totals.	...	39	...	...	10435	67.5	33.2	57	89.7	24	...	...	Sp. gr. 1.02672.
Mean.	sw <sup>b</sup> N.	3	bcm	2	29.869	75.6	72.8	85	77.5	2	Cir str.	Cum.	

## FRIDAY, 14TH.

2.	N.	4	bm	4	29.839	72.8	68.8	79	74.7	0	...	...	At noon, lat. 11° 23' N. long. 18° 42' W. Temperature by self-registering thermo- meter, max. 73°, min. 68°. Current, S. 12°.
4.	N.	3	bm	3	29.841	72.8	68.8	79	74.0	0	...	...	
6.	N.	5	b	...	29.882	72.8	68.8	79	74.5	0	...	...	
8.	s <sup>b</sup> E.	5	bc	...	29.903	71.8	69.8	89	74.5	5	...	Cum.	
10.	s <sup>b</sup> E.	5	bc	4	29.909	71.3	68.3	83	75.0	6	...	Cum.	
Noon.	s <sup>b</sup> E.	5	bc	5	29.891	71.0	67.8	82	75.0	8	...	Cum.	
2.	s <sup>b</sup> E.	5	bc	...	29.873	70.5	67.5	83	74.0	7	...	Cum.	
4.	s <sup>b</sup> E.	4	bc	...	29.873	69.8	66.5	82	73.5	7	...	Cum.	
6.	N.	4	bcm	...	29.893	69.3	66.3	83	72.0	4	...	Cum.	
8.	N.	5	bm	5	29.914	67.8	65.3	85	72.0	0	...	...	
10.	N.	5	bm	5	29.911	69.3	66.3	83	72.5	0	...	...	Sp. gr. 1.02657.
Midt.	N.	5	b	5	29.873	68.8	65.8	83	72.0	0	...	...	
Totals.	...	55	...	35	10602	8.0	90.0	39	43.7	37	...	...	Cum.
Mean.	N <sup>1</sup> / <sub>2</sub> E.	5	bcm	4	29.883	70.7	67.5	82	73.6	3	...	...	

## SATURDAY, 15TH.

2.	N.	5	b	...	29.864	68.8	66.0	84	72.5	0	...	...	At noon, lat. 12° 16' N. long. 21° 18' W. Current, N. 86° W. 30°.
4.	N.	4	bc	...	29.870	68.8	65.8	83	72.5	5	Cir.	Cum.	
6.	N <sup>1</sup> / <sub>2</sub> E.	4	bc	5	29.894	68.0	65.0	83	72.5	5	...	Cum.	
8.	N <sup>1</sup> / <sub>2</sub> E.	4	bc	...	29.913	69.0	65.8	82	72.7	4	...	Cum.	
10.	N. N. E.	5	bc	5	29.939	70.8	66.8	78	73.5	5	...	Cum.	
Noon.	N. N. E.	4	bc	...	29.903	71.0	67.0	78	72.5	5	...	Cum.	
2.	N <sup>1</sup> / <sub>2</sub> N.	5	bc	4	29.847	70.8	67.3	80	73.0	3	...	Cum.	
4.	N <sup>1</sup> / <sub>2</sub> N.	4	bc	4	29.833	71.3	66.8	75	73.0	3	...	Cum.	
6.	N. E.	3	bcm	4	29.860	70.3	66.8	81	72.7	5	...	Cum.	
8.	N. E.	4	bcm	4	29.860	69.8	65.8	78	72.2	4	...	Cum. & Str.	Sp. gr. 1.02652.
10.	N. E.	3	bc	4	29.890	69.3	65.3	78	72.5	6	...	Cum. & Cum str.	
Midt.	N. E.	4	bc	4	29.883	68.8	65.8	83	72.7	6	...	Cum. & Cum str.	Cum. & Cum str.
Totals.	...	49	...	31	10556	116.7	74.2	3	32.3	51	...	...	
Mean.	N. N. E.	4	bcm	4	29.880	69.7	66.2	80	72.7	4	Cir.	Cum. & Cum str.	

## SUNDAY, 16TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea-surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.N.E.	12	bc	4	29.891	68.8	65.8	83	72.0	4	...	Cum.	At noon, lat. 13° 59' S. long. 23° 11' W. Current, s. 51° W. 13'.
4.	N.	3	bc	4	29.894	68.3	64.3	78	71.7	4	...	Cum.	
6.	S.E.	12	bc	...	29.927	68.3	64.5	79	72.0	3	Cir.	Cum.	
8.	N.E. by N.	3	bc	...	29.942	69.8	64.8	73	72.5	3	Cir str.	...	Sp. gr. 1.02630.
10.	N.N.E.	12	bc	...	29.969	70.8	65.5	72	73.0	3	Cir str.	Cum.	
Noon.	N.N.E.	3	bc	3	29.950	71.3	66.5	74	73.2	3	Cir str.	Cum.	
2.	S.E.	3	bc	3	29.936	71.3	66.8	76	73.5	3	...	Cum.	
4.	S.E.	3	bc	...	29.915	71.3	67.3	78	74.0	12	...	Cum.	
6.	N.E.	2	bem	...	29.947	70.8	67.3	80	73.5	3	...	Cum.	
8.	N.E.	1	bm	...	29.960	71.0	67.3	79	73.5	0	...	...	
10.	N.N.E.	2	bem	...	30.015	71.3	67.5	79	73.0	1	Cir str.	...	
Midt.	N.N.E.	3	bm	...	29.985	71.3	67.8	81	73.9	2	Cir str.	...	
Totals.	...	29		14	11334	4.3	75.4	932	34.9	31			
Mean.	N.N.E.	2	bem	3	29.945	70.4	66.3	78	72.9	3	Cir str.	Cum.	

## MONDAY, 17TH.

2.	N.E. by N.	4	bem	...	29.958	69.8	66.8	83	...	1	...	Cum.	At Porto Praya. Temperature by self-registering thermometer, max. 80° 5', min. 67° 0'. 0.45 A.M., anchored at Porto Praya.
4.	N.N.E.	2	b	...	29.954	68.8	66.3	85	...	0	...	...	
6.	N.W.	1	bc	...	29.993	67.8	66.3	91	73.0	1	Cir.	...	
8.	N.N.E.	1	b	...	30.013	73.8	69.9	75	...	0	...	...	5 P.M., left Porto Praya.
10.	N.N.E.	2	bm	...	30.023	79.0	70.5	61	...	0	...	...	
Noon.	N.N.E.	1	bm	...	30.018	77.8	70.0	64	...	0	...	...	
2.	N.N.E.	2	bem	...	29.961	77.8	68.8	59	...	1	Cir str.	...	
4.	N.N.E.	3	bem	...	29.951	77.8	67.8	56	...	1	Cir str.	...	
6.	N.N.E.	3	bc	...	29.977	75.5	71.0	76	...	1	Cir.	...	
8.	N.N.E.	3	bc	...	30.011	74.8	69.8	74	73.5	1	...	Cum.	
10.	N.	2	bem	...	30.052	72.3	70.3	89	73.2	1	Cir cum.	...	
Midt.	S.E.	3	bem	...	29.032	70.8	68.8	89	73.2	2	...	Cum.	
Totals.	...	27		...	11943	46.0	105.4	902	9	9			
Mean.	S.E. ½ E.	2	bem	...	29.995	73.8	68.8	75	73.2	1	Cir str.	Cum.	

## TUESDAY, 18TH.

2.	N.N.E.	2	bem	...	29.995	70.3	68.8	91	72.0	3	Str.	Cum.	At noon, lat. 16° 35' S. long. 24° 55' W. Temperature by self-registering thermometer, max. 76°, min. 68° 5'.
4.	N.N.E.	3	bc	...	29.985	69.8	68.6	93	72.0	3	Str.	Cum.	
6.	N.E. by N.	5	bc	...	30.020	69.8	68.3	91	72.0	5	...	Cum.	
8.	N.N.E.	3	bem	...	30.028	71.8	69.8	79	72.0	1	Cir.	...	4 P.M., anchored at St Vincent (Porto Grande).
10.	N.	5	bem	...	30.033	71.8	69.8	89	72.0	1	Cir.	...	
Noon.	N.N.E.	5	bem	...	30.015	72.3	69.8	86	72.0	1	Cir.	...	
2.	N.	5	bem	...	29.956	75.0	70.0	74	72.5	1	Cir.	...	
4.	N.E. by E.	5	bem	...	29.949	74.5	71.0	82	...	2	Cir.	Cum.	
6.	N.N.E.	3	bem	...	29.966	72.5	69.8	85	...	4	Cir.	Cum.	
8.	N.E.	4	bc	...	30.034	71.3	69.3	88	...	2	...	Cum.	
10.	N.E. by N.	2	bc	...	30.047	70.8	68.3	85	...	2	...	Cum.	
Midt.	N.E. by E.	3	bcq	...	30.022	70.8	68.3	84	...	1	...	Cum.	
Totals.	...	45		...	650	29.7	109.8	1027	5	26			
Mean.	N.N.E. ½ E.	4	bem	...	30.004	71.7	69.1	86	72.1	2	Cir. & Str.	Cum.	

WEDNESDAY, 19TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.	
2.	NE <sup>b</sup> E.	1	bcq	...	30.005	70.3	67.8	85	...	3	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, min. 66°.
4.	NE <sup>b</sup> E.	3	bcq	...	29.994	70.0	67.8	87	...	5	...	Cum.	
6.	NE <sup>1</sup> E.	4	bcqm	...	30.013	69.5	68.3	93	71.2	4	Cir str.	Cum.	
8.	E <sup>b</sup> N <sup>1</sup> S.	3	bcqm	...	30.039	71.3	69.3	88	71.2	3	Cir str.	Cum.	
10.	E <sup>b</sup> N <sup>1</sup> S.	5	bcu	...	30.013	72.8	70.3	87	71.5	3	Cir.	Cum.	
Noon.	E <sup>b</sup> N <sup>1</sup> S.	7	bcqm	...	29.972	73.8	70.3	81	71.5	2	Cir str.	Cum.	
2.	NE <sup>1</sup> E.	6	bcq	...	29.928	73.3	69.8	82	...	3	...	Cum.	
4.	NE <sup>1</sup> E.	7	bcq	...	29.914	72.3	68.8	81	...	2	...	Cum.	
6.	NE <sup>1</sup> E.	6	bcq	...	29.941	71.3	68.0	82	71.2	4	Cir.	Cum.	
8.	NE <sup>1</sup> E.	7	bcq	...	29.990	70.3	67.5	84	...	2	Str.	Cum.	
10.	NE <sup>1</sup> E.	5	bc	...	29.997	69.3	66.8	85	...	1	...	Cum.	
Midt.	NE <sup>1</sup> S.	6	bc	...	30.002	69.3	66.8	85	...	1	...	Cum.	
Totals.	...	60	...	...	11808	13.5	101.5	60	16	33	Cir str.	Cum.	
Mean.	NE <sup>b</sup> E.	5	bcqm	...	29.984	71.1	68.5	85	71.3	3	Cir str.	Cum.	

THURSDAY, 20TH.

2.	NE <sup>1</sup> E.	3	bq	...	29.971	68.8	65.8	83	...	0	...	...	At Porto Grande.  0.30 A.M. to 2.30 A.M., numerous meteors observed.
4.	NE <sup>1</sup> E.	7	bq	...	29.968	68.3	65.3	83	...	0	...	...	
6.	NE <sup>1</sup> E.	4	bcq	...	30.001	67.8	64.8	83	70.5	4	Cir cum.	Cum.	
8.	NE <sup>1</sup> E.	5	bcq	...	30.041	72.8	67.8	74	...	4	Cir cum.	Cum.	
10.	NE <sup>1</sup> E.	3	bc	...	30.054	73.8	69.0	75	...	4	Cir.	Cum.	
Noon.	NE <sup>1</sup> E.	6	bc	...	30.032	73.3	68.3	74	...	2	...	Cum.	
2.	NE <sup>1</sup> E.	5	bc	...	29.983	73.3	68.3	74	...	2	...	Cum.	
4.	NE <sup>1</sup> E.	6	bc	...	29.966	72.8	67.8	74	...	5	...	Cum.	
6.	NE <sup>1</sup> E.	3	bc	...	29.990	70.8	66.3	75	70.5	4	...	Cum.	
8.	NE <sup>1</sup> E.	6	bcq	...	30.014	69.8	66.0	79	...	3	...	Cum.	
10.	NE <sup>1</sup> E.	3	bc	...	30.044	69.5	65.8	79	...	3	...	Cum.	
Midt.	NE <sup>1</sup> E.	6	bcq	...	30.046	69.0	65.3	79	...	2	...	Cum.	
Totals.	...	57	...	...	110	10.0	80.5	92	...	33	Cir cum.	Cum.	
Mean.	NE <sup>1</sup> E.	5	bcq	...	30.009	70.8	66.7	78	70.5	3	Cir cum.	Cum.	

FRIDAY, 21st.

2.	NE <sup>1</sup> E.	6	bcq	...	30.012	68.8	65.3	81	...	2	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, max. 75°, min. 66°.
4.	E <sup>b</sup> N <sup>1</sup> S.	2	bcq	...	30.005	68.3	64.8	81	...	2	...	Cum.	
6.	NE <sup>1</sup> E.	4	bcq	...	30.035	68.3	65.3	83	69.7	5	...	Cum.	
8.	NE <sup>1</sup> E.	2	bcq	...	30.070	74.0	68.3	71	...	5	...	Cum.	
10.	NE <sup>1</sup> E.	4	bcq	...	30.097	72.8	68.8	79	...	8	...	Cum.	
Noon.	NE <sup>1</sup> E.	2	bcq	...	30.081	72.8	68.5	78	...	6	Cir.	Cum.	
2.	NE <sup>1</sup> E.	5	bcq	...	30.037	73.0	67.8	73	...	5	...	Cum.	
4.	NE <sup>1</sup> S.	2	bcq	...	30.037	72.8	68.8	79	...	6	...	Cum.	
6.	NE <sup>1</sup> S.	5	bcq	...	30.051	71.8	67.8	79	71.0	5	...	Cum.	
8.	NE <sup>1</sup> E.	2	bc	...	30.063	70.8	67.8	83	...	5	...	Cum.	
10.	NE <sup>1</sup> E.	3	bcq	...	30.087	70.3	67.5	84	...	4	...	Cum.	
Midt.	NE <sup>1</sup> E.	2	bcq	...	30.069	69.8	67.0	84	...	4	...	Cum.	
Totals.	...	39	...	...	644	13.5	87.7	115	...	57	Cir.	Cum.	
Mean.	NE <sup>1</sup> E.	3	bcq	...	30.054	71.1	67.3	79	70.3	5	Cir.	Cum.	

SATURDAY, 22<sup>d</sup> APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea Level.	Thermometer.		Humidity, Sat. 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.	
	True Direction.	Force.				Dry Bulb.	Wet Bulb.				Upper.	Lower.		
2.	N.E.	5	bc	...	30.041	69.5	66.8	85	...	4	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, max. 75.5, min. 68.0.	
4.	N.E.	12	bc	...	30.026	69.0	66.5	86	...	3	Str.	Cum.		
6.	N.E.	5	bc	...	30.055	69.8	66.8	83	70.2	4	Cir.	Cum.		
8.	N.E.	3	bc	...	30.086	73.3	69.5	80	...	5	Cir.	Cum.		
10.	N.E.	5	bc	...	30.098	74.3	70.3	79	...	4	Cir.	Cum.		
Noon.	N.E.	4	bc	...	30.085	73.3	69.3	79	...	4	...	Cum.		
2.	N.E.	6	bc	...	30.045	73.0	69.5	82	...	12	...	Cum.		
4.	N.E.	4	bc	...	30.027	72.0	69.0	84	...	3	Cir cum.	Cum.		
6.	N.E.	5	bc	...	30.042	70.8	67.8	83	70.5	3	...	Cum.		
8.	N.E.	3	bc	...	30.074	69.8	66.8	84	...	12	...	Cum.		
10.	N.E.	5	bc	...	30.089	69.8	66.8	83	...	12	...	Cum.		
Midt.	N.E.	2	bc	...	30.070	69.3	66.3	83	...	1	...	Cum.		
Totals.	...	49	bc	...	738	13.9	95.4	39	...	37	Cir.	Cum.		
Mean.	N.E.	4		...	30.061	71.2	67.9	81	70.3	3				

SUNDAY, 23<sup>d</sup>.

2.	N.E.	4	bc	...	30.028	69.0	66.3	84	...	4	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, max. 77.7, min. 67.0.	
4.	N.E.	3	bc	...	30.012	68.8	65.6	82	...	2	...	Cum.		
6.	N.E.	4	bc	...	30.044	68.8	65.0	79	70.0	4	...	Cum.		
8.	N.E.	3	bc	...	30.059	72.3	67.8	77	...	4	...	Cum.		
10.	N.E.	5	bc	...	30.066	74.8	68.8	70	...	4	...	Cum.		
Noon.	N.E.	2	bc	...	30.044	73.8	68.3	72	...	3	...	Cum.		
2.	N.E.	4	bc	...	29.992	73.3	67.8	72	...	2	...	Cum.		
4.	N.E.	3	bc	...	29.964	72.8	67.8	74	...	3	Cir.	Cum.		
6.	N.E.	4	bc	...	29.978	71.5	67.0	76	71.2	4	Cir.	Cum.		
8.	N.E.	3	bc	...	29.989	70.3	65.8	76	...	4	...	Cum.		
10.	N.E.	5	bc	...	30.020	69.8	65.8	78	...	3	...	Cum.		
Midt.	N.E.	1	bc	...	30.015	69.0	64.8	77	...	3	...	Cum.		
Totals.	...	41	bc	...	211	14.2	80.8	77	...	40	Cir.	Cum.		
Mean.	N.E.	3		...	30.048	71.2	66.7	76	70.6	3				

MONDAY 24<sup>TH</sup>.

2.	N.E.	6	bc	...	29.965	69.8	65.8	78	...	4	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, max. 77.5, min. 68.0.		
4.	N.E.	1	bc	...	29.941	69.3	64.8	76	...	8	...	Cum.			
6.	N.E.	3	bc	...	29.965	69.8	66.5	82	70.7	9	...	Cum.			
8.	N.E.	4	bc	...	29.991	72.8	66.8	79	...	4	...	Cum.			
10.	N.E.	3	bc	...	29.983	74.8	66.8	62	...	3	...	Cum.			
Noon.	N.E.	2	bc	...	29.981	75.8	66.8	59	...	3	Cir.	Cum.			
2.	N.E.	3	bc	...	29.931	74.3	66.8	64	...	2	...	Cum.			
4.	N.E.	4	bc	...	29.932	73.3	65.8	64	...	2	...	Cum.			
6.	N.E.	3	bc	...	29.936	71.8	65.3	67	71.0	2	...	Cum.			
8.	N.E.	2	bc	...	29.969	70.5	64.8	70	...	1	...	Cum.			
10.	N.E.	3	bc	...	29.988	69.8	64.0	70	...	2	...	Cum.			
Midt.	N.E.	2	bc	...	29.990	69.0	63.8	72	...	1	...	Cum.			
Totals.				...	36	...	11572	21.0	68.0	834	...	41		Cir.	Cum.
Mean.				N.E.	3	...	29.964	71.8	65.7	69	70.8	3			

## TUESDAY, 25TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE½E.	1	bc	...	29.965	68.8	64.8	78	...	2	...	Cum.	At Porto Grande. Temperature by self-registering thermo- meter, max. 77°·5.
4.	Nb½W.	4	bc	...	29.955	68.8	64.8	78	...	5	...	Cum.	
6.	Nb½E.	6	bc	...	29.998	69.3	64.3	73	71.0	6	...	Cum.	
8.	NE½E.	2	bc	...	30.026	72.8	66.8	70	...	6	...	Cum.	
10.	NE½N.	2	bc	...	30.049	73.3	69.8	69	...	5	...	Cum.	
Noon.	NE½N.	4	bc	...	30.046	74.8	67.8	66	...	4	...	Cum.	
2.	NE½E.	2	bc	...	29.981	74.8	67.0	63	...	3	...	Cum.	
4.	NE½E.	3	bc	...	29.980	74.5	64.8	56	...	1	...	Cum.	
6.	ENE½N.	1	bc	...	30.004	72.8	66.8	70	71.2	2	...	Cum.	
8.	NE½E.	2	bc	...	30.025	70.8	65.3	71	...	1	...	Cum.	
10.	NE½E.	1	bc	...	30.040	70.8	64.8	69	...	2	...	Cum.	
Midt.	NE½E.	2	bc	...	30.054	69.8	64.8	73	...	3	...	Cum.	
Totals.	...	24	bc	...	117	24.3	71.8	836	...	40	...	Cum.	
Mean.	NE½N.	2	bc	...	30.010	72.0	66.0	70	71.1	3	...	Cum.	

## WEDNESDAY, 26TH.

2.	NE½E.	3	bc	...	29.992	69.8	64.8	73	...	6	...	Cum.	At noon, lat. 16° 49' N. long. 25° 14' W. Temperature by self-registering thermo- meter, max. 78°·5, min. 68°·5.
4.	N.N.E.	0	bc	...	29.992	69.8	64.3	71	...	5	...	Cum. & Str.	
6.	N.	1	bc	...	30.029	69.8	64.8	73	...	7	...	Cir cum. Cum. & Str.	
8.	N. N. E.	2	bc	...	30.059	71.8	66.3	71	...	7	...	Cum.	
10.	N. N. E.	2	bc	...	30.082	72.8	66.8	70	73.0	2	...	Cir.	
Noon.	E. N. E.	1	bc	...	30.073	74.8	67.8	66	73.2	2	...	Cir.	
2.	Variable.	0	bc	...	30.032	76.5	68.8	64	...	2	...	Cir.	
4.	Variable.	1	bc	...	30.011	75.5	68.5	66	75.7	2	...	Cir.	
6.	Calui.	0	b	...	30.020	73.3	67.8	72	...	0	...	...	
8.	N. E.	2	b	...	30.029	71.8	67.8	72	74.5	0	...	...	
10.	N.	4	bc	...	30.069	70.8	65.8	73	73.0	2	...	Cum.	9 P.M., passed from under the lee of San Antonio island.
Midt.	Nb½E.	3	bc	...	30.072	70.8	63.8	78	72.2	3	...	Cum.	
Totals.	...	19	bc	...	470	27.5	80.3	16	21.6	38	...	Cum. & Str.	
Mean.	NNE½E.	2	bc	...	30.039	72.3	66.7	71	73.6	3	...	Cir.	

## THURSDAY, 27TH.

2.	Nb½E.	3	bc	...	30.043	70.8	65.8	78	72.2	3	...	Cum.	At noon, lat. 17° 18' N. long. 26° 32' W. Temperature by self-registering thermo- meter, max. 73°·5, min. 68°·5. Current, s. 80° W. 12'.
4.	Nb½E.	2	bc	...	30.058	70.5	65.5	78	72.2	8	...	Cum.	
6.	Nb½E.	1	e	...	30.059	70.0	65.0	78	72.5	10	...	Cum.	
8.	N½E.	2	bc	...	30.059	70.8	65.8	73	72.5	8	...	Cum.	
10.	N½W.	2	bc	...	30.071	71.0	66.3	74	72.5	6	...	Cir cum.	
Noon.	NNE½E.	2	bc	...	30.059	72.8	67.8	74	73.5	4	...	Cir str.	
2.	N½W.	2	bc	...	30.010	72.8	67.8	74	73.5	4	...	Cum.	
4.	N½W.	3	bc	...	29.987	71.8	67.3	77	73.5	1	...	Cir.	
6.	N½E.	2	bc	3	29.994	71.3	67.3	78	73.0	2	...	Cum.	
8.	N½E.	4	bc	2	30.002	70.8	67.8	83	72.5	6	...	Cum.	
10.	N½W.	3	bc	...	30.032	70.8	67.8	83	72.5	6	...	Cum.	Flying fish seen. Sp. gr. 1.02700.
Midt.	Nb½E.	4	bc	2	30.024	70.8	67.8	83	72.5	7	...	Cum.	
Totals.	...	39	bc	...	378	14.2	85.0	93	32.9	65	...	Cir str.	Cum.
Mean.	N½E.	2	bc	2	30.051	71.2	67.1	78	72.7	5	...	Cum.	

## FRIDAY, 28TH APRIL 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NNE $\frac{1}{2}$ E.	2	bc	1	30.029	70.8	67.3	81	72.0	4	...	Cum.	At noon, lat. 17° 47' N. long. 28° 28' W. Temperature by self-registering thermo- meter, max. 74°, min. 69°. Current, s. 34° W. 17'. Phosphorescence in wake of ship.
4.	NNE $\frac{1}{2}$ E.	3	bc	...	29.985	70.8	66.8	78	72.0	5	...	Cum.	
6.	NNE $\frac{1}{2}$ E.	1	bc	...	30.014	70.5	66.8	79	72.5	5	...	Cum.	
8.	NNE $\frac{1}{2}$ E.	0	bc	...	30.019	70.8	66.3	75	72.5	7	Cir.	Cum.	
10.	NNE $\frac{1}{2}$ E.	2	bc	...	30.015	71.8	67.3	77	72.7	4	...	...	One swallow seen. Sp. gr. 1.02697.
Noon.	N $\frac{1}{2}$ W.	1	bc	...	30.004	72.8	67.8	74	73.5	3	...	Cum.	
2.	N $\frac{1}{2}$ E.	2	bc	...	29.966	73.8	68.8	74	74.0	5	...	Cum.	
4.	N $\frac{1}{2}$ E.	3	bc	...	29.950	72.8	67.8	74	73.5	1	...	Cum.	
6.	N $\frac{1}{2}$ E.	2	bc	3	29.955	71.8	67.8	79	73.2	4	...	Cum.	Numerous pyrozoa.
8.	N $\frac{1}{2}$ E.	2	bc	2	29.972	71.8	67.8	79	73.2	6	...	Cum.	
10.	N $\frac{1}{2}$ W.	3	bc	2	30.007	71.3	67.8	81	73.0	4	...	Cum.	
Midt.	N $\frac{1}{2}$ W.	2	bc	2	30.006	71.0	67.5	81	73.0	8	...	Cum.	
Totals.	...	23	bc	8	11922	20.0	89.8	92	35.1	61	Cir.	Cum.	
Mean.	N $\frac{1}{2}$ E.	2		2	29.993	71.7	67.5	78	72.9	5			

## SATURDAY, 29TH.

2.	N $\frac{1}{2}$ E.	0	bc	...	29.908	70.3	67.3	83	73.5	2	...	Cum.	At noon, lat. 18° 8' N. long. 30° 5' W. Temperature by self-registering thermo- meter, max. 75°, min. 68° 2. Current, s. 72° W. 23'.
4.	N $\frac{1}{2}$ E.	2	bc	...	29.906	69.8	66.8	83	...	5	...	Cum.	
6.	N $\frac{1}{2}$ E.	1	bc	...	30.010	70.5	66.8	79	72.5	3	...	Cum.	
8.	N $\frac{1}{2}$ E.	1	bc	...	30.044	70.8	66.8	78	72.7	3	...	Cum.	
10.	NE $\frac{1}{2}$ N.	1	bc	...	30.049	72.8	68.5	78	73.2	3	...	Cum.	Sp. gr. 1.02753. Upper clouds from N.W.
Noon.	NNE $\frac{1}{2}$ E.	1	bc	...	30.036	73.5	68.5	74	74.0	3	...	Cum.	
2.	N $\frac{1}{2}$ E.	1	bc	1	30.011	73.8	68.8	74	73.5	1	Cir str.	...	
4.	N $\frac{1}{2}$ E.	2	bc	...	29.986	73.3	68.8	77	...	2	Cir cum.	...	
6.	N $\frac{1}{2}$ E.	2	bc	...	29.991	72.8	68.8	79	74.5	3	Cir.	Cum.	Upper clouds from N.W.
8.	N $\frac{1}{2}$ E.	1	bc	...	30.049	72.3	68.8	82	74.2	7	...	Cum.	
10.	NNE $\frac{1}{2}$ E.	2	bc	...	30.067	72.0	68.8	83	73.7	7	Cir.	Cum.	
Midt.	NE $\frac{1}{2}$ N.	2	bc	...	30.065	72.0	69.3	85	73.7	6	Cir.	Cum.	
Totals.	...	16	bc	...	302	23.9	98.0	955	35.5	45	Cir.	Cum.	
Mean.	N.N.E.	1		1	30.025	72.0	68.2	79	73.5	4			

## SUNDAY, 30TH.

2.	NNE $\frac{1}{2}$ E.	2	bc	1	30.062	71.8	68.8	84	73.5	4	...	Cum.	At noon, lat. 19° 49' N. long. 30° 34' W. Temperature by self-registering thermo- meter, max. 73° 5, min. 70° 7. Current, w. 17'.
4.	NE $\frac{1}{2}$ N.	2	bc	1	30.063	71.8	68.8	84	73.2	6	...	Cum.	
6.	NE $\frac{1}{2}$ N.	3	bc	...	30.081	71.8	69.8	89	73.5	5	Cir.	Cum.	
8.	NE $\frac{1}{2}$ N.	2	bc	2	30.116	72.3	69.3	84	73.0	8	...	Cum. & Cum str.	
10.	NE $\frac{1}{2}$ N.	3	bc	...	30.129	72.8	69.8	84	73.0	7	Cir.	Cum.	A few drops of rain about 11 A.M. Sp. gr. 1.02762.
Noon.	NE $\frac{1}{2}$ E.	2	bc	1	30.114	73.3	69.8	82	73.5	5	Cir.	Cum.	
2.	NE $\frac{1}{2}$ E.	3	bc	...	30.107	73.0	70.0	84	73.7	5	Cir.	Cum.	
4.	NE $\frac{1}{2}$ E.	2	bc	...	30.103	72.8	69.3	81	73.5	4	Cir.	Cum.	
6.	NE $\frac{1}{2}$ E.	3	bc	3	30.107	72.8	69.8	84	...	6	Cir cum.	Cum.	Upper clouds from N.W.
8.	NE $\frac{1}{2}$ E.	3	bc	3	30.151	72.3	68.8	82	73.5	6	Cir cum.	Cum. & Cum str.	
10.	NE $\frac{1}{2}$ E.	3	bc	3	30.177	71.8	69.8	89	73.0	7	Str.	Cum.	
Midt.	NE $\frac{1}{2}$ E.	3	bc	3	30.171	71.8	68.8	84	73.0	7	Cir cum.	Cum.	
Totals.	...	31	bc	17	1372	28.3	112.8	51	36.4	70	Cir. & Cir cum.	Cum. & Cum str.	
Mean.	N.E.	3		2	30.114	72.4	69.4	84	73.3	6			

## MONDAY, 1st May 1876.

Hour.	Wind.		Weather.	State of Sea.	Barometer reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.157	71.0	68.5	85	73.0	7	...	Cum.	At noon, lat. 21° 43' N. long. 31° 19' W. Temperature by self-registering thermometer, max. 73°, min. 70°. Current, s. 66° w. 17.
4.	NE <sup>1</sup> / <sub>2</sub> E.	3	bcp	...	30.125	71.0	68.9	83	73.0	8	...	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	30.161	70.8	68.0	84	73.0	7	Cir cum.	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	2	30.197	71.3	68.3	83	73.0	7	...	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.220	71.8	68.8	84	73.0	7	Cir cum.	Cum.	
Noon.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	30.207	71.8	68.8	84	73.0	6	Cir.	Cum & Cum	
2.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	30.167	72.8	69.0	80	73.2	4	Cir.	Cum.	
4.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	...	30.149	72.0	68.8	83	73.2	4	Cir.	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	2	30.165	71.0	68.3	84	73.2	4	...	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.200	70.3	67.5	84	72.0	2	...	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.218	69.8	67.3	85	72.0	6	...	Cum.	One petrel seen. Sp. gr. 1.02771.
Midt.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	3	30.219	69.8	66.8	83	72.0	6	...	Cum.	
Totals.	...	32											
Mean.	NE <sup>1</sup> / <sub>2</sub> E.	3	bcp	7	2185	13.4	98.1	42	34.6	68	Cir. & Cir cum.	Cum.	

## TUESDAY, 2d.

2.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.194	69.3	66.3	83	72.0	6	...	Cum.	At noon, lat. 23° 48' N. long. 32° 33' W. Temperature by self-registering thermometer, max. 71.5, min. 67.8. Current, s. 62° w. 26.
4.	...	...	...	...	30.192	69.3	66.3	83	71.5	...	...	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	3	e	...	30.201	69.8	66.8	83	71.5	4	...	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.223	69.8	65.8	78	70.0	6	Cir.	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	3	30.240	70.8	66.8	78	71.0	8	Cir cum.	Cum.	
Noon.	NE <sup>1</sup> / <sub>2</sub> E.	5	bcp	...	30.241	70.3	66.8	81	71.0	10	Cir str.	Cum.	
2.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	3	30.212	70.8	66.8	78	71.0	5	...	Cum.	
4.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.200	70.3	66.8	81	71.0	6	...	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	3	30.227	69.8	66.8	83	70.7	4	...	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	3	30.229	69.5	66.0	81	71.0	6	...	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	4	30.284	68.8	65.8	83	70.0	4	...	Cum.	Sp. gr. 1.02775.
Midt.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	3	30.281	68.5	65.0	80	70.0	7	...	Cum.	
Totals.	...	41											
Mean.	NE <sup>1</sup> / <sub>2</sub> E.	4	bcp	19	2724	117.0	76.0	12	9.7	71	Cir str.	Cum.	

## WEDNESDAY, 3d.

2.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	3	30.233	67.8	64.8	83	70.0	7	...	Cum & Cum	At noon, lat. 23° 16' N. long. 33° 33' W. Temperature by self-registering thermometer, max. 75°, min. 66°. Current, s. 67° w. 25.
4.	NE <sup>1</sup> / <sub>2</sub> E.	5	bc	...	30.217	67.8	64.8	83	70.0	5	...	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.243	68.0	64.8	80	70.0	8	...	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	5	bcp	4	30.279	67.8	64.8	83	70.2	9	...	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.279	69.0	65.5	81	70.2	8	...	Cum.	
Noon.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.281	70.0	66.0	78	70.5	6	Cir.	Cum.	
2.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	3	30.260	72.3	66.8	72	70.7	3	Cum & Cum.	Cum.	
4.	NE <sup>1</sup> / <sub>2</sub> E.	2	bc	2	30.263	71.5	66.5	73	70.7	2	Cir cum.	Cum.	
6.	NE <sup>1</sup> / <sub>2</sub> E.	3	bc	...	30.270	70.0	66.0	78	70.5	3	Cir str.	Cum.	
8.	NE <sup>1</sup> / <sub>2</sub> E.	...	bc	...	30.272	68.8	65.8	83	70.0	4	...	Cum.	
10.	NE <sup>1</sup> / <sub>2</sub> E.	4	bc	...	30.312	68.5	65.5	83	70.0	4	...	Cum.	Porpoises seen. Sp. gr. 1.02774.
Midt.	NE <sup>1</sup> / <sub>2</sub> E.	...	bc	...	30.311	68.0	64.8	82	70.0	6	...	Cum.	
Totals.	...	36											
Mean.	NE <sup>1</sup> / <sub>2</sub> E.	4	bcp	12	3220	109.5	65.6	119	28	65	Cir str. & Cir cum.	Cum.	

## THURSDAY, 4TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. - 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	N.E.	3	bc	...	30.363	67.8	65.0	84	70.0	6	...	Cum.	At noon, lat. 28° 3' N. long. 34° 51' W. Temperature by self-registering thermo- meter, max. 70°, min. 65° 5. Current, s. 38° W 19'. 10 A.M., passed a large quantity of sea- weed. Sp. gr. 1.02761.
4.	N.E.	4	bc	...	30.313	67.8	64.8	83	70.0	3	...	Cum.	
6.	N.E.	3	bc	...	30.318	67.8	64.8	83	69.5	4	...	Cum.	
8.	N.E.	4	bc	...	30.357	69.3	66.3	83	70.0	5	...	Cum.	
10.	N.E.N.	3	bc	2	30.377	69.3	65.8	81	69.0	2	Cir.	Cum.	
Noon.	N.E.	3	bc	1	30.376	69.3	66.3	83	69.0	3	...	Cum.	
2.	N.E.	3	bc	...	30.367	69.8	65.8	78	70.0	3	...	Cum.	
4.	N.E.	3	bc	...	30.353	69.3	65.8	81	69.7	4	...	Cum.	
6.	N.E.N.	3	bc	...	30.371	69.0	65.8	82	...	4	...	Cum.	
8.	N.E.	3	bc	...	30.393	68.3	65.8	85	69.0	4	...	Cum.	
10.	N.E.	3	bc	...	30.415	68.3	65.8	85	68.5	12	...	Cum.	
Midd.	N.E.	3	bc	1	30.412	67.8	64.8	83	68.0	12	...	Cum.	
Totals.	...	38	bc	4	4355	103.8	66.8	31	102.7	42	Cir.	Cum.	
Mean.	N.E.	3		1	30.363	68.6	65.6	83	69.3	4			

## FRIDAY, 5TH.

2.	N.E.	3	bc	...	30.382	68.0	64.8	82	68.2	6	...	Cum.	At noon, lat. 30° 5' N. long. 36° 6' W. Temperature by self-registering thermo- meter, max. 72°, min. 66° 7. Current, s. 83° W. 16'. Phyalia and gulf-weed seen. Swell from N. Sp. gr. 1.02741.
4.	N.E.	1	bc	...	30.371	67.8	65.0	84	68.0	6	...	Cum.	
6.	N.E.	2	bc	...	30.396	67.8	65.8	88	68.5	2	...	Cum. & Str.	
8.	N.E.	2	bc	2	30.413	68.3	65.8	85	69.0	3	Cir.	Cum.	
10.	N.E.	1	bc	...	30.426	69.3	65.8	81	69.0	3	...	Cum.	
Noon.	N.E.	1	bc	1	30.404	69.8	65.8	78	70.0	2	...	Cum.	
2.	N.E.	1	bc	...	30.390	70.8	66.3	75	71.0	3	...	Cum.	
4.	N.E.	1	bc	...	30.388	71.0	66.8	77	72.0	3	...	Cum.	
6.	Variable.	0	bc	...	30.364	70.8	66.3	75	71.7	2	...	Cum.	
8.	N.E.	1	bc	2	30.390	69.8	65.5	76	70.5	2	...	Cum.	
10.	N.E.	1	bc	...	30.384	69.3	65.8	81	71.5	3	...	Cum.	
Midd.	Variable.	0	bc	...	30.360	69.3	65.3	78	72.0	3	...	Cum.	
Totals.	...	14	bc	5	4668	112.0	69.0	0	1.4	38	Cir.	Cum.	
Mean.	N.E.	1		2	30.389	69.3	65.7	80	70.1	3			

## SATURDAY, 6TH.

2.	Variable.	0	bc	...	30.320	68.8	65.3	81	71.0	4	...	Cum.	At noon, lat. 32° 30' N. long. 36° 8' W. Temperature by self-registering thermo- meter, max. 73° 7, min. 67° 0. Current, s. 41° E. 3'. Sp. gr. 1.02735. Gulf-weed seen. North-westerly swell.
4.	Variable.	1	bcp	...	30.304	68.3	64.8	81	71.0	3	...	Cum. & N.b.	
6.	s.s.w.	1	bc	...	30.321	68.8	65.8	83	70.0	5	...	Cum.	
8.	w.s.w.	0	bc	...	30.316	70.5	66.8	80	70.0	3	...	Cum.	
10.	w.s.w.	1	bc	...	30.287	70.3	66.8	81	70.5	2	Cir cum.	Cum.	
Noon.	w.s.w.	1	bc	4	30.281	72.3	67.8	77	70.5	2	Cir. & C. cum.	Cum.	
2.	w.	3	bc	...	30.244	71.8	67.8	79	70.0	5	...	Cum.	
4.	w.s.w.	1	bc	...	30.221	72.8	67.8	74	70.0	6	Cir str.	Cir cum.	
6.	w.	2	bc	4	30.194	69.8	66.8	83	70.0	4	Cir str.	Cum.	
8.	w.b.	2	bc	...	30.183	68.8	66.0	84	69.7	4	Cir str.	Cum.	
10.	w.s.w.	1	bc	...	30.191	68.8	66.3	85	69.7	4	Cir.	Cum.	
Midd.	w.	2	bc	...	30.160	68.3	65.8	85	69.2	3	Cir str.	Cum.	
Totals.	...	15	bcp	8	3022	119.3	77.8	13	1.6	46	Cir str. & Cir cum.	Cum.	
Mean.	w.b.	1		4	30.252	69.9	66.5	81	70.1	4			

## SUNDAY, 7TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 5.	Barometer re- duced to 32° and Sea Level.	Thermometer		Humidity, Sat = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	W.	4	bc	3	30.076	67.8	65.8	88	69.5	4	...	Cum.	At noon, lat. 34° 22' N. long. 34° 23' W. Temperature by self-registering thermo- meter, max. 67°, min. 61°. Current, s. 5°.
4.	N.W.	4	od	3	30.071	64.8	64.3	97	69.5	10	...	Cum str.	
6.	N.W.	4	odm	4	30.093	64.0	63.5	96	68.5	10	...	Str.	
8.	N.W.	2	odm	5	30.100	62.8	61.8	94	68.2	10	...	Str.	
10.	N.	2	odm	5	30.125	62.5	61.3	93	68.2	10	...	Str.	
Noon.	N.	3	op	...	30.113	64.0	60.5	89	67.0	10	...	Str.	
2.	N.W.	1	bc	...	30.122	65.8	64.8	78	68.0	3	Cir.	Cum & Str.	
4.	N.N.W.	3	bc	...	30.104	65.8	60.8	73	67.5	4	Cir str.	Cum.	
6.	N.N.W.	2	bc	...	30.107	64.3	60.3	77	67.0	6	Cir str.	Cum.	
8.	N.	3	bc	1	30.118	63.3	59.8	80	68.0	6	Cir.	Cum.	
10.	N.	1	bc	...	30.118	63.0	58.8	76	68.0	5	Cir.	Cum.	No gulf-weed seen. Sp. gr. 1.02726.
Midt.	N.E.	2	bc	...	30.101	62.8	59.5	81	67.5	7	...	Cum.	
Totals.	...	31	...	20	1257	50.9	18.0	1013	97.4	85	Cir & Cir str.	Cum. & Str.	
Mean.	N.W. ½ W.	3	...	3	30.105	64.2	61.5	84	68.1	7	...	...	

## MONDAY, 8TH.

2.	N.	2	bew	...	30.099	62.8	59.0	78	66.5	7	...	Cum.	At noon, lat. 35° 51' N. long. 33° 23' W. Temperature by self-registering thermo- meter, max. 66°, min. 57°. Current, s. 43° E. 11'. Long heavy swell. Heavy rain showers passing within sight of ship. Sp. gr. 1.02696.
4.	N.	0	bc	...	30.098	62.5	58.5	77	66.5	4	...	Cum.	
6.	N.	1	bc	4	30.131	62.3	58.3	77	66.5	7	Cir str.	Cum.	
8.	N.E.	0	bc	3	30.147	61.8	59.8	73	66.2	6	Cir str.	Cum.	
10.	N.E.	12	bc	...	30.156	64.8	59.8	73	66.5	5	Cir.	Cum.	
Noon.	N.E.	12	bc	1	30.170	62.3	59.3	82	65.7	7	...	Cum. & Nb.	
2.	N.E.	3	bc	...	30.169	61.5	59.0	85	65.5	6	Cir.	Cum.	
4.	N.E.	3	bc	...	30.174	61.5	58.5	82	65.0	9	...	Cum.	
6.	Variable.	1	ed	...	30.191	58.3	56.8	91	...	10	...	Cum. & Cum str.	
8.	N.E.	3	bep	3	30.213	61.3	57.3	77	64.0	9	...	Cum. & Cum str.	
10.	N.E.	2	bc	4	30.239	60.8	56.8	77	64.0	9	...	Cum.	At noon, lat. 38° 7' N. long. 33° 45' W. Temperature by self-registering thermo- meter, max. 63° 5', min. 57° 0'. Current, s. 23° W. 8°.
Midt.	N.E.	1	bc	1	30.221	60.8	55.8	72	64.0	6	...	Cum.	
Totals.	...	20	...	19	2008	23.7	98.9	944	60.4	85	Cir & Cir str.	Cum. & Cum str.	
Mean.	N.N.E.	2	...	3	30.167	62.0	58.2	79	65.5	7	...	...	

## TUESDAY, 9TH.

2.	N.E.	1	bc	...	30.197	60.8	56.0	73	64.0	2	...	Cum.	At noon, lat. 38° 7' N. long. 33° 45' W. Temperature by self-registering thermo- meter, max. 63° 5', min. 57° 0'. Current, s. 23° W. 8°.
4.	N.E.	2	bc	...	30.188	60.5	56.0	74	63.7	3	...	Cum str.	
6.	N.E.	1	bc	...	30.239	61.8	57.8	77	64.0	3	Cir cum.	Cum. & Str.	
8.	N.E.	2	bc	...	30.262	61.8	57.3	75	64.0	2	Cir cum.	Cum.	
10.	N.E.	2	bc	1	30.259	62.8	57.3	69	64.0	3	...	Cum.	
Noon.	E.	1	bc	...	30.262	61.8	57.8	77	64.5	2	Cir.	Cum.	
2.	E.S.	2	bc	2	30.227	62.8	56.8	67	65.5	2	Cir.	Cum.	
4.	E.	1	bc	...	30.222	62.8	56.8	67	65.0	2	Cir.	...	
6.	S.E.	1	c	...	30.221	61.8	57.3	74	64.5	10	...	Str. & Cum.	
8.	S.E.	2	c	...	30.213	61.3	58.0	80	64.0	10	...	Str. & Cum.	
10.	N.E.	3	ocl	...	30.216	61.0	57.8	81	63.5	10	...	Str. & Cum.	Sp. gr. 1.02687.
Midt.	E.S.E.	4	ocl	2	30.192	60.8	56.8	77	63.0	10	...	Cum str.	
Totals.	...	22	...	5	2698	20.0	85.7	891	49.7	59	Cir & Cir cum.	Cum. & Str.	
Mean.	E.N.	2	...	2	30.225	61.7	57.1	74	64.1	5	...	...	

## WEDNESDAY, 10TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 3.	Barometer re- duced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	E.N.E.	3	bc	3	30.167	59.8	55.8	76	63.0	6	...	Cum.&Str.	At noon, lat. 40° 20' N. long. 32° 2' W. Temperature by self-registering thermo- meter, max. 61°, min. 57°-8. Current, w. 20'.
4.	E.N.E.	3	bc	2	30.145	59.8	56.0	77	63.0	5	...	Cum.&Str.	
6.	E.N.E.	12	bc	...	30.156	59.8	55.8	76	63.0	7	Cir cum.	Cum.	
8.	E.N.E.	3	bc	...	30.169	60.0	55.8	75	62.5	8	...	Cum.	
10.	E.N.E.	12	bc	...	30.145	60.5	56.5	76	62.5	5	Cir.	Cum.	Some porpoises seen going to w.  Sp. gr. 1.02692.
Noon.	E.N.E.	3	bc	2	30.154	60.3	55.8	74	62.5	3	Cir.	Cum.	
2.	E.N.E.	3	bc	...	30.145	60.5	56.8	77	62.5	6	...	Cum.	
4.	E.N.E.	3	bc	2	30.128	59.5	54.8	73	62.7	5	...	Cum.	
6.	N.E. by E.	3	bc	...	30.135	58.8	54.5	75	61.5	4	...	Cum.	Sp. gr. 1.02692.
8.	E.N. by N.	3	bc	...	30.165	57.8	52.8	71	60.7	4	...	Cum.	
10.	N.E. by E.	2	bc	...	30.185	57.8	52.8	71	60.7	4	Cir str.	Cum.	
Midd.	N.E. by E.	3	bc	2	30.184	57.9	52.5	70	60.7	3	Cir cum.	Cum.	
Totals.	...	33	bc	11	1878	111.6	59.9	51	25.3	60	Cir., Cir str., & Cir cum.	Cum. & Str.	
Mean.	E.N.	3		2	30.156	59.3	55.0	74	62.1	5			

## THURSDAY, 11TH.

2.	N.E. by E.	2	bc	...	30.166	56.8	52.3	73	60.0	5	...	Cum.	At noon, lat. 41° 59' N. long. 31° 16' W. Temperature by self-registering thermo- meter, max. 65°, min. 55°-5. Current, w. 13'. Noon, observed a turtle.
4.	N.E. by E.	3	bc	1	30.155	56.8	52.8	75	60.0	3	...	Cum.	
6.	N.E. by E.	2	bc	2	30.178	58.8	53.8	71	60.2	2	...	Cum.	
8.	N.E. by E.	1	bc	...	30.178	58.8	56.8	67	61.9	4	...	Cum.	
10.	N. by E. by E.	2	bc	...	30.185	62.3	57.0	66	61.2	4	Cir.	Cum.	Sp. gr. 1.02673.
Noon.	N.E. by E.	0	bc	...	30.183	62.8	57.0	68	61.9	9	...	Cum.	
2.	N. by E.	3	c	1	30.170	59.5	55.8	78	60.0	10	...	Cum.&Str.&Nb.	
4.	N.E. by E.	1	c	...	30.126	58.3	53.8	74	60.0	10	...	Cum.&Str.&Nb.	
6.	N.E. by E.	0	c	...	30.141	57.8	54.8	81	60.0	10	...	Cum.&Nb.	Sp. gr. 1.02673.
8.	N.E. by E.	1	oed	...	30.149	56.3	53.3	81	60.0	10	...	Str.&Nb.	
10.	N.E. by E.	1	oed	...	30.151	55.8	53.5	85	60.0	10	...	Cum.&Nb.	
Midd.	N.E. by E.	1	bc	...	30.118	56.0	52.8	80	60.0	5	...	Cum.	
Totals.	...	17	bcd	4	1900	105.0	53.7	59	3.4	82	Cir.	Cum., Cum str., & Nimb.	
Mean.	N.E.	1		1	30.158	58.7	54.5	75	60.3	7			

## FRIDAY, 12TH.

2.	N.E. by E.	1	bc	...	30.068	55.0	51.5	78	60.0	4	Cir.	Cum.	At noon, lat. 42° 54' N. long. 28° 54' W. Temperature by self-registering thermo- meter, max. 61°, min. 53°-5. Current, E. 10'.
4.	N.N.E. by E.	2	bc	...	30.110	54.8	51.3	78	60.0	3	Cir str.	Cum.	
6.	N.N.E. by E.	3	bc	2	30.107	54.8	52.3	84	59.0	8	Cir.	Cum.	
8.	N.N.E. by E.	3	bc	2	30.112	56.3	53.3	81	59.0	9	Cir cum.	Cum.	
10.	N.E. by N.	3	bc	...	30.097	56.8	53.3	78	58.0	9	...	Cum.	Sp. gr. 1.02673.
Noon.	N.E. by E.	3	bc	1	30.088	57.8	53.8	76	58.2	7	Cir cum.	Cum.	
2.	N.E. by E.	3	bc	...	30.078	59.5	55.0	74	59.0	5	Cir cum.	Cum.	
4.	N.E. by N.	2	bc	...	30.077	60.0	55.5	74	59.0	4	Cir.	Cum.	
6.	N. by E. by E.	2	bc	...	30.085	58.8	54.8	76	59.0	2	Cir.	Cum.	Sp. gr. 1.02673.
8.	N.N.E. by E.	2	bc	1	30.089	56.8	53.3	78	59.0	3	...	Cum.	
10.	N.N.E. by E.	2	bc	...	30.080	56.3	52.8	78	58.7	2	...	Cum.	
Midd.	N.N. by E.	2	bc	...	30.070	56.3	53.3	81	58.0	2	...	Cum.	
Totals.	...	28	bc	6	1961	83.2	40.2	96	106.9	58	Cir. & Cir cum.	Cum.	
Mean.	N.E. by N.	2		1	30.088	56.9	53.3	78	58.9	5			

SATURDAY, 13TH MAY 1876.

Hour.	Wind		Weather.	State of Sea, 0 to 3.	Barometer, reduced to 32° and Sea Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	NbE½E.	3	bc	...	30.057	56.5	53.5	81	59.0	5	...	Cum.	At noon, lat. 42° 37' N. long. 27° 13' W. Temperature by self-registering thermo- meter, max. 61°, min. 54° 7'. Current, w. 4'.
4.	NbE½E.	4	bc	...	30.046	55.8	52.5	80	58.7	3	...	Cum.	
6.	NbE½E.	3	bc	...	30.056	56.8	53.8	81	58.7	4	Crsta.Cum.	Cum.	
8.	NbE½E.	4	bc	3	30.080	56.3	52.8	78	58.5	6	Cir str.	Cum.	
10.	NbE½E.	3	bc	...	30.076	56.8	54.8	87	59.0	10	...	Cum.	Passed a large piece of timber covered with barnacles.
Noon.	...	...	bc	2	30.059	58.8	56.5	87	59.0	9	...	Cum.	
2.	NNE½E.	12	bc	1	30.050	59.8	56.3	79	59.5	8	Cir.	Cum.	
4.	NbE½E.	12	bc	1	30.043	59.8	56.0	77	59.5	9	Cir.	Cum.	
6.	NbE½E.	12	bc	3	30.048	57.8	54.5	80	59.0	8	Cir cum.	Cum.	11 P.M., cum str. working up from w.s.w.
8.	NbE½E.	12	bc	2	30.056	56.8	53.8	81	59.5	7	Crsta.Cum.	Cum.	
10.	NbE½E.	12	bc	2	30.059	56.8	53.8	81	59.0	6	...	Cum.	
Midt.	NbE½E.	12	bc	2	30.045	56.8	54.3	84	58.5	8	...	Cum str.	
Totals.	...	25	bc	16	675	88.5	52.6	16	107.9	83	Cir., Str., & Cir cum.	Cum.	
Mean.	NbE½E.	2		2	30.056	57.4	54.4	81	59.0	7			

SUNDAY, 14TH.

2.	NNE½E.	2	bc	4	30.046	56.3	53.3	81	58.5	4	Cir cum.	Cum.	At noon, lat. 43° 2' N. long. 25° 5' W. Temperature by self-registering thermo- meter, max. 60° 7', min. 54° 5'. Current, s. 24' w. 11'.
4.	NNE½E.	2	bc	4	30.044	55.8	53.3	84	58.0	3	Cir cum.	Cum.	
6.	NNE½E.	3	bc	4	30.068	56.3	53.5	82	57.7	6	Str.	Cum.	
8.	N½W.	2	bc	4	30.068	57.8	54.8	81	57.5	4	Str.	Cum.	
10.	N½W.	3	bc	3	30.087	57.8	...	...	57.5	4	Str.	Cum.	Petrel and porpoise seen.
Noon.	N½E.	12	bc	4	30.082	58.8	55.8	82	57.7	4	Str.	Cum.	
2.	NbE½E.	4	bcq	3	30.082	58.8	55.8	82	57.5	7	...	Cum & Cumst	
4.	NNE½E.	3	bc	3	30.093	59.3	55.8	79	57.2	3	...	Cum.	
6.	N½W.	3	bc	...	30.106	58.0	55.3	83	57.5	4	...	Cum.	Heavy nimb. passing to s. Sea phosphorescent.
8.	N½E.	...	bc	...	30.126	56.8	54.3	84	58.0	5	...	Cum & Nb.	
10.	N½E.	3	bc	...	30.150	55.8	53.8	87	58.0	6	...	Cum & Cumst	
Midt.	NbE½E.	5	bcq	...	30.122	54.8	53.3	90	58.0	8	...	Cum & Cumst	
Totals.	...	32	bcq	29	1074	86.3	49.0	35	93.1	58	Cir cum. & Str.	Cum. & Cum str.	
Mean.	NbE.	3		4	30.089	57.2	54.5	83	57.8	5			

MONDAY, 15TH.

2.	NbE½E.	3	bc	4	30.108	55.8	52.8	81	58.0	7	...	Cum & Cumst	At noon, lat. 42° 32' N. long. 22° 50' W. Temperature by self-registering thermo- meter, max. 59° 5', min. 53° 5'. Current, s. 19' w. 18'.
4.	NbE½E.	5	bc	...	30.126	55.8	52.8	81	58.0	7	...	Cum & Cumst	
6.	NNE½E.	5	bcq	5	30.165	55.5	52.8	84	57.5	6	...	Cum.	
8.	NNE½E.	3	bcq	5	30.162	56.2	53.2	81	58.0	6	...	Cum.	
10.	NNE½E.	4	bc	...	30.181	57.5	54.8	83	58.0	6	...	Cum.	3 P.M., passed a large basking shark.
Noon.	N.N.E.	4	bc	...	30.199	57.8	54.0	77	58.0	6	...	Cum.	
2.	NbE½E.	5	bc	5	30.186	58.3	54.0	75	57.5	4	Cir.	Cum.	
4.	NbE½E.	3	bc	6	30.167	56.8	54.8	87	57.5	7	...	Cum & Cumst	
6.	NNE½E.	5	c	5	30.199	56.8	54.3	84	...	10	...	Cum & Cumst	
8.	NE½N.	5	bc	6	30.187	56.8	53.8	81	57.0	8	Cir.	Str.	
10.	NE½N.	...	bc	...	30.197	56.8	54.0	82	57.0	10	...	Cum.	
Midt.	NE½N.	3	bc	...	30.193	56.5	53.8	83	57.5	...	...	Cum.	
Totals.	...	45	bcq	36	2070	80.7	45.2	19	84.0	77	Cir.	Cum. & Cum str.	
Mean.	NNE½E.	4		5	30.172	56.7	53.8	82	57.6	7			

TUESDAY, 16TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer re- duced to 32° and Sea-Level.	Thermometer		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N <sup>b</sup> E <sup>1</sup> E.	3	bc	5	30.177	55.8	54.3	90	58.0	8	...	Cum str.	At noon, lat. 41° 58' S. long. 20° 38' W. Temperature by self-registering thermo- meter, max. 59.5, min. 54.5. Current, s. 14° W. 15'. Sea phosphorescent. (Pyrosoma.) Several porpoises seen. Sp. gr. 1.02681.
4.	N <sup>b</sup> E <sup>1</sup> E.	4	bc	5	30.158	56.3	53.3	81	58.0	6	...	Cm.&Cumst	
6.	N <sup>b</sup> E <sup>1</sup> E.	5	bc	5	30.152	55.8	53.5	85	59.0	8	Cir cum.	Cm.&Cumst	
8.	N <sup>b</sup> E.	4	bc	5	30.158	56.3	52.8	78	58.5	4	...	Cum.	
10.	N <sup>b</sup> E.	5	bc	...	30.138	56.8	53.8	81	58.5	9	...	Cum.	
Noon.	N <sup>b</sup> E <sup>1</sup> E.	4	bc	5	30.108	56.8	53.8	81	58.5	7	...	Cm.&Nb.	
2.	N <sup>1</sup> W.	3	bc	...	30.108	58.8	55.3	79	58.5	7	Cir.	Cum.	
4.	NNW <sup>1</sup> W.	4	bc	...	30.086	57.5	54.5	81	58.5	7	Cir.	Cum.	
6.	N <sup>b</sup> W <sup>1</sup> W.	5	bc	5	30.079	57.3	54.0	80	...	5	...	Cum.	
8.	N <sup>b</sup> W <sup>1</sup> W.	4	bc	3	30.073	56.3	53.8	84	58.0	7	...	Cm.&Cumst	
10.	N <sup>b</sup> E <sup>1</sup> E.	5	bc	4	30.059	56.8	53.8	81	58.0	8	...	Str.&Nb.	Sea phosphorescent.
Midt.	N <sup>b</sup> E <sup>1</sup> E.	4	bc	4	30.052	55.8	53.8	87	58.0	5	...	Str.&Nb.	
Totals.	...	50	bc	41	1348	80.3	46.7	28	35	81	Cir.	Cum., Cum str., & Nimb.	
Mean.	N <sup>1</sup> E.	4		5	30.112	56.7	53.9	82	58.3	7			

WEDNESDAY, 17TH.

2.	N <sup>b</sup> E <sup>1</sup> E.	3	bc	...	30.060	55.5	53.0	84	58.0	4	...	Cum.	At noon, lat. 42° 6' S. long. 18° 1' W. Temperature by self-registering thermo- meter, max. 59.7, min. 53.7. Current, s. 5° W. 18'. Saw a sea gull. Sp. gr. 1.02674.
4.	N <sup>1</sup> W.	3	bc	...	30.060	55.5	52.8	83	57.5	3	...	Cm.&Nb.	
6.	N <sup>1</sup> W.	4	bc	...	30.089	55.3	52.5	82	57.5	3	...	Cum.	
8.	N <sup>1</sup> W.	4	bc	5	30.083	55.3	52.8	84	57.5	3	...	Cm.&Str.	
10.	N <sup>1</sup> W.	4	bc	3	30.140	57.3	53.8	78	58.0	4	...	Cum.	
Noon.	N <sup>1</sup> W.	4	bc	...	30.136	57.3	54.8	84	58.0	3	...	Cum.	
2.	N <sup>1</sup> W.	5	bc	4	30.151	57.8	54.8	81	57.7	3	...	Cum.	
4.	N <sup>1</sup> W.	4	bc	4	30.150	57.8	54.8	81	57.7	7	...	Cum.	
6.	N <sup>1</sup> W.	4	bc	4	30.177	57.3	54.3	81	57.7	4	Cir cum.	Cum.	
8.	N <sup>b</sup> W <sup>1</sup> W.	3	bc	4	30.222	56.3	53.8	84	57.2	4	Str.	Cum.	
10.	N <sup>1</sup> W.	4	bc	...	30.212	55.8	52.8	81	57.5	5	...	Cum.	
Midt.	N <sup>1</sup> W.	3	bc	3	30.242	55.3	52.3	81	57.0	4	...	Cum.	
Totals.	...	45	bc	27	1722	76.5	42.5	24	91.3	47	Cir cum. & Str.	Cum.	
Mean.	N <sup>1</sup> W.	4		4	30.143	56.4	53.5	82	57.6	4			

THURSDAY, 18TH.

2.	N <sup>b</sup> W.	4	bc	3	30.240	55.3	52.8	84	57.0	2	...	Str.	At noon, lat. 42° 42' S. long. 15° 17' W. Temperature by self-registering thermo- meter, max. 59, min. 54'. Current, s. 13° W. 20'. Several porpoises seen. Sp. gr. 1.02687.
4.	N. N. W.	3	bc	3	30.218	55.8	53.8	87	56.5	2	...	Str.	
6.	N <sup>b</sup> W.	5	bc	4	30.266	55.3	53.0	85	56.0	3	...	Cum.	
8.	N <sup>b</sup> W.	5	bc	...	30.260	55.5	53.3	86	56.0	4	...	Cum.	
10.	N.	5	bc	4	30.277	57.0	54.3	83	56.5	4	Str.	Cum.	
Noon.	N. N. W.	6	bc	5	30.255	58.3	55.3	81	56.7	6	Str.	Cum str.	
2.	NW <sup>1</sup> N.	7	bc	...	30.250	56.8	55.8	93	57.0	10	...	Cum str.	
4.	N <sup>b</sup> W.	5	bc	4	30.249	57.0	56.0	93	57.0	9	...	Cm.&Cumst	
6.	N.	6	bc	5	30.279	57.0	55.5	90	57.0	4	...	Cm.&Str.	
8.	N <sup>b</sup> W.	5	bc	...	30.284	56.3	54.8	90	56.0	4	...	Cum.	
10.	N <sup>b</sup> W.	6	bc	...	30.318	55.8	54.8	93	55.7	8	...	Cm.&Cumst	
Midt.	N.	4	bc	...	30.290	55.3	53.3	87	55.7	4	...	Cm.&Cumst	
Totals.	...	61	bc	28	3186	75.4	52.7	92	77.1	60	Str.	Cum. & Cum str.	
Mean.	N <sup>b</sup> W.	5		4	30.265	56.3	54.4	88	56.4	5			

## FRIDAY, 19TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea, 0 to 9.	Barometer reduced to 32° and Sea-Level.	Thermometer.		Humidity, Sat. = 100.	Temperature of Sea Surface.	Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.				Upper.	Lower.	
2.	N.	6	bc	4	30.271	54.3	52.3	86	55.5	8	...	Cum str.	At noon, lat. 42° 48' S. long. 12° 15' W. Temperature by self-registering thermo- meter, max. 58° 2, min. 53° 0. Current, s. 48° W. 12'.
4.	N <sup>b</sup> E.	4	bc	...	30.252	54.8	51.8	81	55.5	10	...	Cum str.	
6.	N. N. E.	5	bc	...	30.301	54.5	52.3	85	55.0	7	...	Cum.	
8.	N. N. E.	6	bc	5	30.296	54.8	52.8	87	55.7	9	...	Str. & Cum.	
10.	N. N. E.	4	bc	...	30.301	55.5	52.8	83	55.5	9	...	Str. & Cum.	
Noon.	N.	4	bc	...	30.294	56.5	53.5	81	55.5	8	...	Cum.	
2.	N <sup>b</sup> E.	5	bc	5	30.270	57.5	54.8	83	56.0	9	...	Cm & Cum st	
4.	N <sup>b</sup> E.	6	bc	5	30.259	57.5	54.8	83	56.0	5	...	Cm & Cum st	
6.	N <sup>b</sup> E.	6	bc	4	30.229	56.3	54.3	87	...	8	...	Cm & Cum st	
8.	N. N. E.	5	bcm	4	30.210	54.8	52.8	87	56.0	1	...	Str.	
10.	N <sup>b</sup> E.	6	bcm	...	30.214	55.0	53.0	87	55.7	6	...	Cm & Nb.	
Midt.	N. N. E.	...	bcm	...	30.209	54.5	51.8	82	55.7	6	...	Cm & Nb.	
Totals.	...	57	bcqn	27	3109	66.0	37.0	52	62.1	86	...	Cum., Str., & Nimb.	
Mean.	N <sup>b</sup> E.	5		4	30.259	55.5	53.1	84	55.6	7	...		

## SATURDAY, 20TH.

2.	N <sup>b</sup> E.	7	bcqn	5	30.176	53.3	50.8	83	55.5	9	...	Cm & Cum st	At noon, lat. 42° 20' S. long. 9° 12' W. Temperature by self-registering thermo- meter, max. 65, min. 51° 2.
4.	N. N. E.	4	bc	4	30.165	53.5	50.8	82	55.5	7	...	Cm & Cum st	
6.	N. N. E.	7	bc	4	30.154	53.8	51.8	86	56.5	6	...	Cum.	
8.	N. N. E.	6	...	...	30.161	55.3	55.3	100	56.5	5	...	Cum.	
10.	N. N. E.	7	bcm	1	30.145	56.8	54.3	84	56.5	1	Cir.	...	
Noon.	N. N. E.	1	b	...	30.125	58.8	57.3	91	57.0	0	...	...	
2.	W. S. W.	1	bc	...	30.085	64.5	61.3	81	...	2	Cir.	...	
4.	S. S. W.	1	bc	...	30.085	66.8	62.3	75	...	2	Cir.	...	
6.	W. S. W.	1	bc	...	30.057	66.3	63.0	82	...	4	Cir str.	...	
8.	Calm.	0	bc	...	30.076	62.3	59.8	85	...	1	Cir.	...	
10.	Calm.	0	bm	...	30.092	58.8	57.8	94	...	0	...	...	3.30 P.M., anchored in Vigo bay.
Midt.	Calm.	0	bm	...	30.081	57.5	55.8	89	...	0	...	...	
Totals.	...	35	bcm	14	1402	107.7	80.3	72	37.5	37	Cir str.	Cum. & Cm str.	
Mean.	Variable.	3		3	30.117	59.0	56.7	86	56.3	3			

## SUNDAY, 21ST.

2.	Calm.	0	bm	...	30.081	56.0	54.8	92	...	0	...	...	At Vigo. Temperature by self-registering thermo- meter, max. 69°, min. 52° 5.
4.	Calm.	0	bm	...	30.069	55.8	54.5	91	...	0	...	...	
6.	W. S. W.	1	bcm	...	30.096	56.8	56.8	100	...	1	Str.	...	
8.	W. S. W.	0	bcm	...	30.120	60.3	58.3	88	...	0	...	...	
10.	W. S. W.	1	bcm	...	30.129	62.8	59.8	82	...	0	...	...	
Noon.	W. S. W.	1	bcm	...	30.132	63.0	59.8	81	...	2	Cir str.	...	
2.	swbw.	1	bcm	...	30.127	66.3	61.5	74	...	1	Str.	...	
4.	W. S. W.	1	bcm	...	30.119	63.8	59.8	77	59.0	1	Cir.	...	
6.	S. S. W.	3	bcm	...	30.100	60.3	57.0	81	56.7	1	Cir.	...	
8.	N. N. W.	3	bcm	...	30.148	55.8	55.3	97	55.7	1	Cir str.	...	
10.	N <sup>b</sup> W.	5	bc	...	30.167	54.8	53.3	90	55.5	1	Str.	...	2.30 P.M., left Vigo.
Midt.	N <sup>b</sup> W.	4	bc	...	30.203	54.3	52.8	90	55.5	3	...	Cum.	
Totals.	...	20	bcm	...	1491	110.0	83.7	104.3	32.4	11	Cir., Str., & Cir str.	Cum.	
Mean.	W. S. W.	2		...	30.124	59.2	57.0	87	56.5	1			

MONDAY, 22d May 1876.

Hour.	Wind.		Weather.	State of Sea, 6 to 9.	Barometer re- duced to 32 and Sea-Level	Thermometer.				Clouds, 0 to 10	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. %	Temperature of Sea Surface.		Upper.	Lower.	
2.	N.	3	bc	...	30.265	54.8	52.8	87	56.5	1	Str.	...	At noon, lat. 44° 4' N. long. 9° 23' W. Temperature by self-registering thermo- meter, max. 60°, min. 53°. Current, s. 23°.
4.	N.W.	1	bcm	...	30.268	54.8	53.3	90	56.0	1	Str.	...	
6.	N.W.	1	o	...	30.260	55.3	54.8	97	55.7	10	...	Str. & Cum.	
8.	N.W.	3	e	...	30.270	57.8	54.8	81	55.5	9	...	Cum. & Cum.	
10.	N.W.	1	...	...	...	...	...	...	55.5	...	...	...	2.30 P.M., sea changed to a dirty green colour.
Noon.	W.S.W.	12	bc	1	30.278	57.8	55.8	87	56.0	8	...	Cum. & Str.	
2.	W.S.W.	3	bc	2	30.225	58.8	57.3	91	56.5	5	...	Cum.	
4.	W.S.W.	4	bc	...	30.235	57.8	55.8	87	56.2	5	Cir str.	Str.	
6.	W.S.W.	3	e	...	30.252	56.5	54.8	89	56.0	9	...	Str. & Cum.	
8.	W.S.W.	4	bc	...	30.252	55.5	54.3	92	56.0	6	Cir.	Cum. & Str.	
10.	W.S.W.	2	bc	...	30.259	55.3	53.8	90	55.5	8	...	Cum. & Str.	
Midt.	W.S.W.	3	oe	...	30.220	54.8	53.5	91	55.5	10	...	Cum. & Str.	
Totals.	...	30	bc	3	2667	69.2	51.0	982	70.9	72	Str. & Cir str.	Cum. & Str.	
Mean.	N.W.	2		1	30.242	56.3	54.6	89	55.9	7			

TUESDAY, 23d.

2.	W.	6	oeq	3	30.150	54.8	52.8	87	55.0	10	...	Cum str.	At noon, lat. 47° 25' N. long. 6° 50' W. Temperature by self-registering thermo- meter, max. 58°, min. 52°. Current, s. 35° E. 19°.
4.	W.S.W.	4	oeq	...	30.131	53.8	52.8	93	55.0	10	...	Cum. & Str.	
6.	W.S.W.	5	bc	4	30.145	55.3	53.8	90	55.0	7	Cir cum.	Cum. & Str.	
8.	W.S.W.	5	bc	4	30.113	55.0	53.3	89	54.0	6	Cir cum.	Cum.	
10.	W.S.W.	5	bc	...	30.109	54.8	53.0	88	54.0	9	...	Cum.	
Noon.	W.S.W.	6	bc	...	30.089	55.0	53.5	90	54.0	7	...	Cum.	
2.	W.S.W.	5	bc	3	30.028	56.8	54.8	87	54.0	4	Cir.	Cum.	
4.	W.S.W.	12	bc	2	29.992	55.3	53.5	88	53.7	5	Cir str.	Cum.	
6.	W.S.W.	4	e	3	29.961	54.3	52.8	90	53.2	10	Cir str.	Cum. & Nb.	
8.	W.S.W.	2	cpr	...	29.886	51.8	50.8	93	53.0	10	...	Str. & Nb.	
10.	W.S.W.	2	ed	...	29.910	51.8	51.0	94	53.5	10	...	Cum.	
Midt.	swby.	1	ocr	...	29.819	50.0	49.0	93	53.2	10	...	Cum. & Nb.	
Totals.	...	47	beyr	19	333	48.7	31.1	2	47.6	98	Cir str. & Cir cum.	Cum., Str., & Nimb.	
Mean.	W.S.	4		3	30.028	54.1	52.6	90	54.0	8			

WEDNESDAY, 24th.

2.	N.S.E.	1	opsl	...	29.734	48.8	47.8	93	...	9	...	Cum. & Nb.	At noon, lat. 50° 7' N. long. 3° 5' W. Temperature by self-registering thermo- meter, max. 59° 5', min. 46° 5'.
4.	W.S.W.	1	oe	1	29.705	48.8	47.5	92	51.2	10	...	Cum. & Nb.	
6.	W.S.W.	1	oeq	...	29.684	48.8	47.8	93	51.5	10	...	Cum. & Cum.	
8.	N.W.	2	bc	1	29.695	49.8	47.8	86	50.5	8	...	Cum.	
10.	W.S.W.	2	bc	...	29.694	52.8	50.8	86	51.0	4	Cir.	Cum.	9.25 P.M., anchored at Spithhead.
Noon.	W.S.W.	1	bc	...	29.700	53.8	51.8	86	51.5	3	Cir.	Cum.	
2.	W.S.W.	2	bc	...	29.694	57.5	54.5	81	51.2	3	Cir.	Cum.	
4.	W.S.W.	2	bc	...	29.687	56.3	53.5	82	...	4	Cir.	Cum.	
6.	W.	1	bc	...	29.686	53.8	51.5	84	...	4	Cir.	Cum.	
8.	W.S.W.	2	bcp	...	29.674	50.8	49.8	93	...	8	...	Cum. & Cum.	
10.	W.S.W.	1	bcm	...	29.696	50.8	49.8	93	...	6	Str.	Cum.	
Midt.	Calm.	0	om	...	29.705	50.0	48.8	92	...	10	...	Cum.	
Totals.	...	16	bcmj	2	8354	22.0	1.4	101	6.9	79	Cir str.	Cum., Str., & Cum str.	
Mean.	W.S.	1		1	29.696	51.8	50.1	88	51.1	7			

THURSDAY, 25TH MAY 1876.

Hour.	Wind.		Weather.	State of Sea. 0 to 9.	Barometer re- duced to 32° and Sea Level.	Thermometer.				Clouds, 0 to 10.	Description of Clouds.		REMARKS.
	True Direction.	Force.				Dry Bulb.	Damp Bulb.	Humidity, Sat. = 100.	Temperature of Sea Surface.		Upper.	Lower.	
2.	Calm.	0	omd	...	29.708	49.8	48.8	93	...	10	...	Str.	At Spithead.
4.	sw $\frac{1}{2}$ w.	2	c	...	29.713	49.0	48.5	97	...	10	...	Cum.	
6.	NNE $\frac{1}{2}$ E.	1	oqp	...	29.740	48.5	47.8	94	...	10	...	Cum.	
8.	N.N.E.	2	oct	...	29.763	48.8	48.3	97	...	10	...	Cum.	
10.	sw $\frac{1}{2}$ w.	3	cm	...	29.794	49.0	48.0	93	...	10	...	Cum.	
Noon.	sw $\frac{1}{2}$ w.	4	or	...	29.790	49.8	48.3	90	...	10	...	Cm.&Cum.st	
2.	N $\frac{1}{2}$ W.	3	c	...	29.825	50.3	48.3	86	...	9	...	Str.	
4.	NNE $\frac{1}{2}$ E.	3	bc	...	29.820	51.8	48.8	80	...	9	Cir cum.	Cm.&Str.	
6.	N.N.E.	1	bc	...	29.838	52.8	49.0	75	52.8	8	Cir.	Cum.	
8.	N.N.E.	3	oc	...	29.838	52.8	49.8	80	...	10	...	Cm.st&Nbh.	
10.	N.N.E.	1	oc	...	29.860	49.8	48.8	93	...	10	...	Cum.	
Midt.	Calm.	0	ocm	...	29.839	49.8	48.8	93	51.5	10	...	Cum str.	
Totals.	...	23	...	...	9518	62.2	103.2	1071	4.3	116	Cir. & Str.	Cum., Str., & Cum str.	
Mean.	Variable.	2	...	...	29.793	50.2	48.6	89	52.1	10	...	...	

FRIDAY, 26TH.

2.	Calm.	0	om	...	29.836	49.8	48.8	93	50.2	10	...	Str.	At noon, lat, 50° 57' N. long. 1° 5' E. Temperature by self-registering thermo- meter, max. 53° 5', min. 46° 5'.
4.	sw $\frac{1}{2}$ w.	1	om	...	29.844	49.0	48.8	99	50.0	9	...	Str.	
6.	NW $\frac{1}{2}$ N.	2	om	...	29.856	48.5	47.8	94	...	10	...	Str.	
8.	NNW $\frac{1}{2}$ W.	3	om	...	29.846	46.8	46.8	100	50.0	10	...	Cum.	
10.	NNW $\frac{1}{2}$ W.	2	odm	...	29.824	49.8	49.8	100	...	10	...	Cum str.	
Noon.	NNW $\frac{1}{2}$ W.	1	odm	...	29.776	49.8	49.8	100	50.7	10	...	Cum str.	
2.	sw $\frac{1}{2}$ w.	1	odm	...	29.749	50.8	50.8	100	51.0	10	...	Str.	
4.	W.N.W.	3	om	...	29.737	51.8	51.8	100	50.5	10	...	Str.	
6.	W.N.W.	1	om	...	29.745	52.5	52.5	100	...	10	...	Str.	
8.	S.W.	1	om	...	29.767	53.3	53.3	100	...	10	...	Cum str.	7 P.M., anchored at the Nore.
10.	sw $\frac{1}{2}$ w.	2	om	...	29.789	53.3	53.3	100	...	10	...	Str.	
Midt.	sw $\frac{1}{2}$ w.	1	om	...	29.778	53.0	53.0	100	...	10	...	Str.	
Totals.	...	18	...	...	9547	8.4	6.5	1186	2.4	119	...	Str., Cum., & Cum str.	
Mean.	sw $\frac{1}{2}$ w.	1	...	...	29.796	50.7	50.5	99	50.4	10	...	...	

SATURDAY, 27TH.

2.	Wb $\frac{1}{2}$ S.	3	om	...	29.778	52.3	52.3	100	...	10	...	Str.	At Sheerness.
4.	W.N.W.	1	om	...	29.768	52.8	52.8	100	...	10	...	Str.	
6.	N.W.	3	om	...	29.785	52.8	52.3	97	52.7	10	...	Str.	
8.	W.N.W.	2	om	...	29.812	52.5	52.5	100	...	10	...	Str.	
10.	W.N.W.	2	om	...	29.835	53.5	53.5	100	...	10	...	Str.	
Noon.	sb $\frac{1}{2}$ E.	1	c	...	29.884	54.8	54.5	98	...	10	...	Str.	
2.	sb $\frac{1}{2}$ E.	1	om	...	29.893	55.8	55.3	97	...	10	...	Cum str.	
4.	N.W.	2	om	...	29.914	55.8	54.8	93	...	10	...	Cum str.	
6.	N.W.	1	om	...	29.949	55.3	54.8	97	53.0	10	...	Cum str.	
8.	N.W.	1	c	...	29.981	54.8	54.8	100	...	10	...	Cum str.	
10.	N.W.	1	bcu	...	30.003	53.8	52.8	93	...	6	...	Cum str.	
Midt.	NW $\frac{1}{2}$ N.	2	bc	...	30.036	51.8	50.8	93	...	4	...	Cum str.	
Totals.	...	20	...	...	10638	46.0	41.2	1168	...	110	...	Str., & Cum str.	
Mean.	N.W.	2	...	...	29.886	53.8	53.4	97	52.8	9	...	...	

THE  
VOYAGE OF H.M.S. CHALLENGER.

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THE PRESSURE ERRORS OF THE CHALLENGER THERMOMETERS.

By Professor TAIT.

THOUGH the contents of the following paper have been, with the sanction of Sir Wyville Thomson, communicated at intervals during the last two sessions, and in particular on April 4th, 1881, to the Royal Society of Edinburgh, they are now published for the first time. The brief abstracts which have appeared in some scientific journals have given an inadequate, and by no means accurate, account of my method and results.

The subject is the reduction of the deep-sea observations which were made on the Challenger, in so far as these are affected by pressure. The thermometers employed had protected bulbs; but the stems, in which there were certain aneurisms,<sup>1</sup> were wholly unprotected. The determination of the necessary pressure corrections is of great importance, especially in the bearing of the results upon ocean circulation and other grand points of physical geography;—and when, at Sir Wyville Thomson's request, I undertook the inquiry, I resolved to carry it out with a degree of accuracy suitable at once to the capabilities of the thermometers employed and to the magnitude of the issues involved.

In the course of my work several improvements, which may be useful in future investigations of a similar kind, have suggested themselves; but my primary object was simply to find how to obtain the most trustworthy results from a set of observations already made, the instruments with which they were made having been put in my possession.

The work has extended through a very considerable time, having occupied my leisure moments for a large part of each of the last three years. The nature of the difficulties which were successively met with and overcome will be easily seen from what follows without farther preface.

The whole matter looks uncommonly simple now that the instrumental and other

<sup>1</sup> From *ἀνεύρημα*, a widening or swelling (*ἀνα* and *εὔρε*); *not*, as is sometimes stated, *ἀ-νευρος* (without sinews). Hence the word is correctly used for the peculiarity in the thermometers.

difficulties have been discovered and met, and I have recently repeated the investigation in a tenth of the time it originally cost me. The data given in columns 7, 8, 9, 12, and 13 of the Table in Appendix E below, are (with the exception of those for one thermometer in which the mercury column had been accidentally broken) those obtained in this repetition of the inquiry. They were found to agree so well with the earlier data that it was considered unnecessary to print these.

I found myself at the beginning of the inquiry very much in the position of a chemist who has given to him a mixture containing half a dozen absolutely unknown elements, all in very small and in nearly equal quantities, and who is required to determine the nature and properties of each, and also the proportions in which they occur in the mixture.

A great many very curious offshoots have sprung from the inquiry, some of which are of real scientific importance. For instance, the determination of the amount of heat developed by exposing to very high pressures, under different circumstances, various kinds of substances. This question, so far as I am aware, has as yet been treated (even theoretically) only for moderate pressures. Again, there is the very curious question, What is the cause of the breaking of a piece of glass or other fragile body, under hydrostatic pressure? Does it break in consequence of uniform compression, or of shearing, or of extension only; and at what amount of compression, or shear, or extension, does it give way? And there is the very important practical question of the accurate measurement of pressures greater than can readily be compared with the weight of a tall column of mercury. Amagat has successfully worked with a column of mercury of more than 1000 feet in height, corresponding to a pressure of about 3 tons weight per square inch. But there is a limit, to experiment in this direction, which he has nearly reached. The simple and easily manageable apparatus described below has been found capable of giving results of considerable accuracy up to pressures of 12 tons weight on the square inch, and will probably be applicable much farther.

After some consideration I have decided to give, first, a general account of the whole work in terms which will be easily intelligible to all readers; and then to develop at length special parts of the inquiry which have scientific interest, either pure or practical, but which are not of a nature to be easily comprehended except by specialists. Of course I reserve for the latter part the proofs (experimental or mathematical) of the statements now to be made.

For convenience, this subject is arranged as follows:—

*The Pressure-Corrections supplied to the Challenger along with the Thermometers.*

*Construction of the Thermometers.*

*Wholly protected Instruments. Their Defect.*

*Individual Peculiarities of some of the Challenger Thermometers.*

*Captain Davis' Mode of Testing ; and his Correction for the Maximum Side.* (With this Appendix C.—*Heating of Water by Compression.*)

*Consequent Correction for the Minimum Side.*

*Theoretical Determination of the Direct Effect of Pressure. Experimental Verification.* (With this Appendix A.—*On the Accurate Measurement of High Pressures.*)

*The Aneurisms. Their Object and Effects.* (With this Appendix B.—*Calculation of the Effect of an Aneurism.*)

*Imploding and Exploding of the Thermometer Bulbs.*

*Description of the Apparatus for applying Pressure.* (Extended in Appendix D.)

*Accurate Measurement of great Pressures.* (Also Appendix A.)

*Internal Pressure Gauges.*

*External Pressure Gauge.*

*Results of the Experiments. The true correction for pressure is very small.*

*Sources of the large effect obtained in the Press.*

*Final Conclusion from the Investigation.* (Detailed in Appendix E.—*Tabular Synopsis of the General Results of Experiment and Calculation.*)

These we will now take in order.

### *The Pressure-Corrections supplied to the Challenger along with the Thermometers.*

When I was first asked to examine the thermometers I judged, from the appearance and nature of the protection over the bulbs, that very slight corrections only would be required, even for the greatest pressures to which they had been exposed. But Sir Wyville Thomson told me that a correction of at least half a degree Fahr. had been assigned for them for every mile under the sea. This correction had been given him by Captain Davis of the Admiralty, who had in his experiments<sup>1</sup> the assistance and advice of such exceedingly able experimenters as the late Professor W. Allen Miller and others.

Hence, although it appeared to me at first sight incredible that any such correction should be required for thermometers with protected bulbs, I considered it absolutely necessary to try Captain Davis' experiments over again, under the same conditions as those which he had adopted in conjunction with Professor Miller. My object was, of course, to find out whether I could again obtain these results, and, if I could obtain them, to discover what were the causes which led to their being so exceedingly different from what I should have expected. I felt assured that the results were much too large ; —and I had therefore, if I could reproduce them, to trace the various possible causes of divergence between the results of experiments conducted in a hydrostatic press and of other similar experiments made at the same pressures in the deep sea.

<sup>1</sup> "On Deep-Sea Thermometers," by Captain J. E. Davis, R.N. (*Proceedings of the Meteorological Society*, April 1871).

Half-a-degree Fahrenheit per mile of depth may seem to be a matter of very little consequence ; but when we recollect that some of the Challenger soundings were made at depths nearly approaching six miles, we find that we have sometimes to deal with a correction of  $3^{\circ}$  F., enough to modify seriously our theories of ocean circulation. For it can never be too strongly impressed on the student of science that there is no such thing as greatness or smallness in itself ; what is very small relatively to one class of quantities may be very great relatively to another and different one. All the temperature differences, except near the surface of the sea, though important in their consequences, are very small relatively to differences of temperature in the atmosphere ; but, just because they are so small, small errors in the determination of their values are important :—thus it was imperative to decide whether the corrections assigned by Captain Davis are necessary.

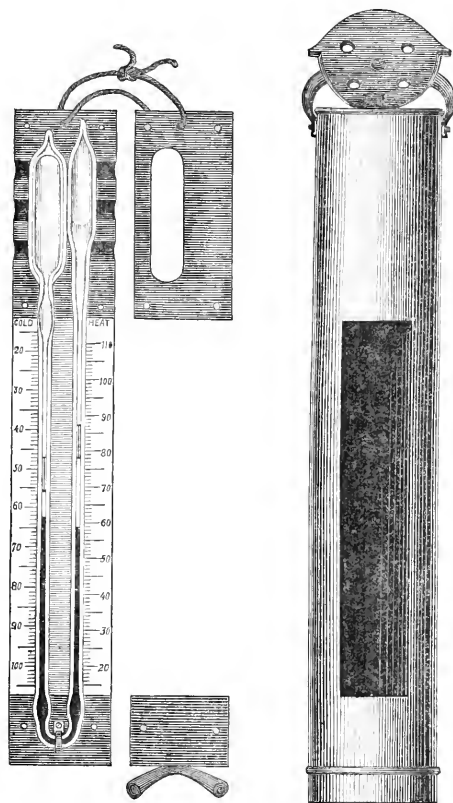
At first sight one might think that by far the best way of conducting an inquiry of the kind would be to carry it out under circumstances nearly the same as those of the Challenger observations. No doubt, if we had at hand a coal-pit or mine-shaft full of water, and of six miles or so in depth, we might make the experiments without the aid of presses, and under circumstances far more favourable than those in which I was obliged to operate. The reasons for this statement will appear presently. There are great objections to making test-observations at sea. The Challenger observations themselves had, of course, to be made at sea, but to make under similar circumstances experiments for the purpose of determining corrections would be a perfectly hopeless attempt. The circumstances under which thermometers are let down and drawn up again at sea are extremely unfavourable to accuracy of observation. I had, therefore, to content myself with such conditions as could be procured by means of hydrostatic presses.

### *Construction of the Thermometers.*

I will now say a word or two about the construction of the thermometers themselves ; and I shall thus have an opportunity of pointing out some of the peculiarities of construction to which I have traced the greater part of the very large effects obtained by Captain Davis, and given by him as corrections which required to be made.

The Challenger thermometers are all of the Six pattern : there is a highly expansible liquid in the large bulb, which projects to a certain extent into the narrow U-tube. Then there is a column of mercury occupying the bend of the U and part of each stem. Above that, on the maximum side, there is some more of the sensitive liquid ; and at the ends of the mercury column are the maximum and minimum indices, each containing a piece of steel, so that they can be set by means of an external magnet. The large bulb on which the temperature effects are mainly produced is protected by an exterior shell of glass strong enough to resist a pressure of at least 5000 fathoms of sea-water ; that is to

say, approximately, somewhere about six tons weight per square inch. This external shell is nearly filled with alcohol. The main difference between this and the first invented form of protected thermometer, which (so far as I know) was introduced by Sir William



Thomson,<sup>1</sup> is simply that the bulb only is protected, the stem being exposed, and therefore the effects produced directly by compression are due solely to the stem of the

<sup>1</sup> "The Effect of Pressure in Lowering the Freezing-point of Water experimentally demonstrated," by Professor W. Thomson (*Proc. R.S.E.*, February 1850). See also the paper by Parrot (1833) quoted below. In this a protected thermometer was undoubtedly employed; but the protecting sheath was part of the wall of the compression apparatus and was not attached to the thermometer itself. From a reference in this paper I was led to consult Lenz's observations on deep-sea temperatures. He appears to have measured these temperatures by bringing to the surface, with great care, a considerable quantity of water from each depth. There was a thermometer in the collecting apparatus, with a bulb of extra thickness; but no recording index was employed, so as to show what was its indication under pressure.

instrument : unless, indeed, there be a strain produced on the protected bulb (altering its volume) by the wry-neckedness of the protecting shell.

Now, as a rule, till quite recently, practical workers in glass supposed that no effect at all would be produced by pressure upon an ordinary thermometer stem, simply because the external diameter is so much greater than the internal ; and, in fact, so little was the nature of the effects of hydrostatic pressure known to practical glass-blowers that one of Mr Casella's workmen undertook in 1869 to furnish Captain Davis with thermometers whose bulbs should be so thick as to "*defy compression*" ! It will be seen presently that such an idea is entirely absurd ;—that, however thick is an unprotected thermometer, it will still have its indications altered by compression, and very nearly as much as a thinner one, unless that be extremely thin. So far as the Challenger instruments are concerned, the only effect that can be expected to be produced directly by pressure is the diminution of the bore and length of the narrow tube, and the consequent forcing of the liquid which occupies it to fill a greater length in it. I made at starting a rough calculation of the amount of effect of this kind which was to be expected ; taking average data as to the compressibility and rigidity of glass. I found it to be a small fraction only of a degree for each ton-weight of pressure, except on those thermometers which had very short degrees. It was clear to me, therefore, that (unless the wry-neckedness already mentioned was the cause) the larger part of Captain Davis' result was not due to pressure directly.

### *Wholly protected Instruments. Their Defect.*

For the purpose of comparison with the Challenger instruments, so far as regards the effect on the unprotected stem, Sir Wyville Thomson sent me two mercury thermometers constructed after Sir William Thomson's device. In these instruments the whole, bulb and stem alike, is enclosed in a strong glass tube, nearly filled with alcohol. The effects of pressure on these instruments were very much smaller than on the thermometers of the Challenger. This result was so unexpected that I at first thought it due to defects in the new instruments. But, as will be seen later, it is quite consistent with the final result of my investigations. It is, however, very difficult to obtain good results from these instruments under the circumstances in which I was working. Their recording adjustment is constructed on a new plan, in which a little portion of mercury is detached from the rest ; and separated from it by a small quantity of air, which does not move it until compressed to a definite amount. To set the index before an observation, the instrument has to be swung round somewhat sharply at arm's length. It was scarcely ever possible under these circumstances to adjust it to the temperature of the water in the press. The indices in the Challenger thermometers, on the other hand, consist each of a piece of enamel with a couple of hairs attached to it so as to fix itself in the tube and

retain a record of the observation. They have also a little piece of needle inside, and can thus be moved from the exterior by means of a horse-shoe magnet, so that the adjustment can be made at pleasure, and without any alteration of the temperature. The thermometers are plunged for some hours in the water in the press, and the indices are set in an instant while the instrument is partially lifted out for the purpose. With the other instruments one might spend days before he could get them introduced, except after special cooling, into the press with the index suitably adjusted to the temperature of the water. The whole difficulty might have been avoided by putting an exceedingly small piece of iron or steel wire above the index, to be acted on by a sufficiently powerful magnet.

Thus, although these instruments are absolutely perfect so far as regards immunity from pressure (and in other essential respects which will be mentioned later), it is not easy to work with them under the circumstances of this investigation.

#### *Individual Peculiarities of some of the Challenger Thermometers.*

The Challenger thermometers are not all exactly similar to one another. Some of them have their degrees very much longer than others; others have the extraordinary peculiarity that the degrees upon the maximum side are nearly half as long again as those on the minimum side, and sometimes it is the reverse. In one of the instruments which was occasionally used in the deep sea, the length of a single degree on the maximum side is only about three-fourths of a millimetre, and thus a reading to a tenth of a degree is not to be looked for. But on account of this unexpected peculiarity, this particular instrument was of use, as will be seen later, in demonstrating that the effects produced in the press were due partly to heating, partly to compression. Several instances of useful peculiarities of a similar character were detected, and utilised.

In fact, the instruments cannot be said to do more than furnish rough and ready means of approximating to temperatures within about a quarter of a degree, or in the most favourable circumstances a tenth of a degree Fahrenheit. Had they been more nearly what would be called "scientific" instruments, they might have altogether failed on account of the rough treatment to which they were necessarily subjected during use. Letting them down into the sea presents in general no great difficulties, but when they have to be hauled on board again they are subject to jerks and shocks, and sometimes swing through large arcs at the end of the lead line. Such misadventures are unavoidable at sea, and are excessively unfavourable to accurate results, because the index is necessarily not fitted so tightly in the stem that it may not in a few oscillations be sensibly displaced. And there is a defect inseparable from the use of movable indices:—viz., that the reading of the mercury column is sensibly different according as the

index is, and is not, in contact with it. The capillary convexity affects the maximum and minimum indices in *opposite* ways.

Further, I may observe (though it does not affect my work) that in these thermometers the scale is at some distance from the mercury in the stem, and no provision is made for avoiding parallax or personal equation. By merely altering the position in which one holds the thermometer, it is possible to read the temperature whether by the mercury column or the end of the index next it, to an amount different in some of the thermometers by as much as a quarter of a degree, and in the great majority of them by as much as a tenth. Thus if we get readings consistent within a tenth of a degree we get all that the instruments are capable of furnishing. I have therefore always read the thermometers in exactly the same position and (when so much accuracy was attainable) only to the nearest tenth of a degree. And I have always made my comparisons between successive positions of the index; the only readings of the mercury directly being taken roughly to find whether any permanent temperature-change had been produced in the water of the press by pressure or otherwise, during the course of an experiment.

A great many different materials were tried for the framing of the thermometers: and vulcanite was finally chosen, having been found to answer the purpose exceedingly well. Wood warped, and metal was unsuitable for various reasons. It is rather curious to find, as will be seen below, that this substance was one of the main causes of the very large amount assigned to the pressure-correction.

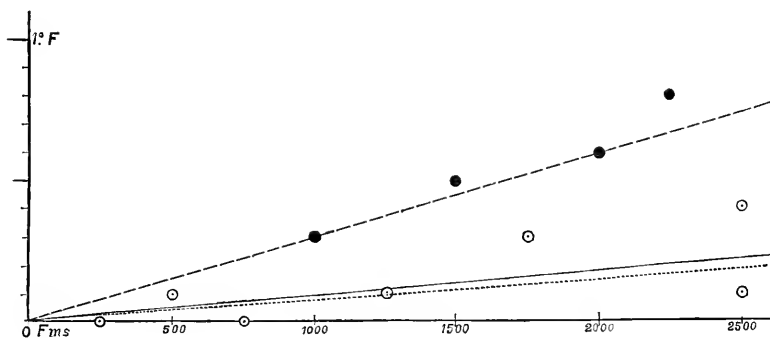
*Captain Davis' Mode of Testing; and his Correction for the Maximum Side.*

It is necessary to look somewhat closely into the mode in which Captain Davis conducted his experiments, in so far at least as it differs from the one I afterwards employed; in order that we may be able to form an idea how, with nearly all the facts before him, he yet failed to get their proper interpretation. Take, for instance, the way in which he attempted to determine the correction which is due to the heating of water by compression. This, of course, affects the thermometers while in the hydrostatic press, but *not* when they are let down into the sea. When the water in the press is compressed with the thermometers in it, it becomes hotter as the pressure increases (so long at least as its temperature is above  $4^{\circ}$  C. or  $39^{\circ}\cdot 2$  Fahr., that of its maximum density). This is quite analogous to the heating of air in a cylinder when a piston is suddenly forced down; when, as every one knows, tinder can be kindled by the heat developed. So water is heated by compression, but not to anything like the same extent. But it is necessary to remark that the amount of heating of water by a given compression depends in a very curious manner upon the original temperature of the water. For water taken at its maximum density is neither heated nor cooled by compression, but it

is heated by compression if it is at a temperature higher, and cooled if it is at a temperature lower, than that of the maximum density. One set of Captain Davis' observations were made in water at temperatures near, but under, the maximum density point: in which, therefore, very little effect can be produced, even by very great pressure (and that little should be cooling, not heating), and he combined these with a number of other observations made at temperatures approaching  $55^{\circ}$  F., in which a comparatively large amount of heating is produced even by moderate pressures. The average of the results of these determinations was taken, but, unfortunately, Captain Davis struck out before taking the average all those observations which appeared to give much larger effects than the others, taking them as being obviously erroneous.

When we sift out from the observations all those made nearly at any one temperature we find they agree fairly enough with the theoretical result of the compression. But observations made at different temperatures were included in the group from which the average effect was deduced. Such an average has no physical meaning.

As this is a point of some importance, I shall give a graphic representation of one set of the observations, those made with one of Sir William Thomson's thermometers;



showing which were rejected, the average thus obtained, what ought to have been obtained, and also the strict theoretical result. In the diagram above, pressures are measured in fathoms of sea water along the horizontal line, and the corresponding changes of temperature, shown by one of the completely protected thermometers, are represented by vertical lines. The centres of each of the series of white and black spots inserted in the diagram represent the various observations made by Captain Davis and Professor Miller at temperatures near  $55^{\circ}$  F.

If we suppose that all these observations had been made in precisely similar circumstances, a fairly approximate way to get the average effect indicated would have been to draw a line through the series of spots in such a way that the average distance from it of

those which lay above, should be equal to that of those lying below. This would have shown a rise of temperature of the water in proportion to the increase of pressure, but its amount would have been considerably under the truth. But the experimenters used only the white spots; and by the help of these drew the full line in the figure as indicating their average; thus obtaining a very slow increase of heating by pressure.

By the help of Sir William Thomson's<sup>1</sup> formula for the heat developed by compression, I have calculated what amount of heating should have been obtained in these experiments, on the supposition that the pressure is applied with sufficient suddenness to let the full effect be produced on the thermometers before there is any sensible absorption of heat by the walls of the pressure vessel: and on the farther assumption (not, as will be seen, justified by experiment) that there is no heating of the glass protecting sheath by pressure. It is represented by the dashed line in the figure, and it is certainly very remarkable that this line (the true one) runs through the group of rejected observations, paying as it were no attention whatever to those which were retained! The formula referred to is discussed in Appendix C below; but, as will be seen at a later stage, the effect on the protected thermometer is not due solely to the heating of water by compression.

Captain Davis concluded from two sets of observations, one at 55° F. and the other about 39° F., that little attention need be paid to the heating of water by compression, (obtaining, in fact, the dotted line), and thus that the effect observed in the hydraulic press was due mainly to direct pressure, and would, of course, be experienced by the thermometers when they were let down into the sea.

The officers who managed the thermometers of the expedition, were, in consequence, furnished with corrections for each thermometer, all of the order already indicated, *i.e.*, about half a degree for each mile under the surface of the sea. These corrections were, of course, for the *maximum* side of each instrument.

#### *Consequent Correction for the Minimum Side.*

Looking at the thermometers, it seemed to me perfectly evident that this correction, if it was to be applied at all, must be applied in very nearly the same amount both to the maximum index, for which it was determined, and also to the minimum. Any difference between these two must be due solely to the effects of temperature upon the column of mercury which lies between the two indices, and of pressure on the tube containing that mercury. Unless the heating effect were *confined* to the space between the indices, the former is provided for by the graduation of the instrument itself; and it was quite certain that the two together could not produce an effect amounting to more than a small fraction of the degree and a half for three tons pressure.

Therefore, as all the readings of the Challenger thermometers were taken from the

<sup>1</sup> "On the Alterations of Temperature accompanying Changes of Pressure in Fluids," by Professor W. Thomson (*Proc. R.S.*, June 1857).

minimum index, they were subject, according to my interpretation of Captain Davis' results, to a correction of very nearly half a degree Fahr. for every mile of depth.

Now, even if the heating effect on the water in the press had been correctly determined, the result would have led to a deduction of at the utmost only about one-fourth of the whole correction, thus still leaving a very formidable correction indeed.

*Theoretical Determination of the Direct Effect of Pressure. Experimental Verification.*

I therefore calculated the effect of pressure on a thermometer tube, assuming the best data for the compressibility and the rigidity of glass. The investigation is given in Appendix A to this paper. As the matter is of considerable importance, I have developed the formulæ sufficiently for application to any case of the kind which is likely to occur. The result, so far as is required for the present argument, is that the internal capacity of a glass tube (whose walls are thick in comparison with the diameter of the bore) is reduced by about  $\frac{1}{10000}$ th part for each ton weight (per square inch) of pressure applied from without; the ends being closed. Hence, if such a tube be partly filled with mercury, with an index above it; the index should be displaced by  $\frac{1}{10000}$ th of the length of the column of mercury for each ton weight of pressure applied to the outside of the tube.

I tried the experiment with a thermometer tube, the length of the mercury column being as nearly as possible a metre, and I found for every ton weight of pressure to which the tube was exposed the index was displaced by one millimetre, the  $\frac{1}{10000}$ th part of the length of the column precisely, being far more nearly than I had expected the result I had already calculated from theory. Since, then, there is only a change of one-thousandth in the length of the column, it is quite obvious that the amount of effect produced upon the column of mercury in the Challenger thermometers (which is not above a sixth or a seventh of a metre in length at the utmost), that is to say, the whole correction-difference between the maximum and minimum indices is a matter of a sixth or seventh of a millimetre; or in general very nearly the same fraction of a degree of the scale. Thus it is proved in two different ways that the correction supplied by the Admiralty, if it is to be applied at all, ought to be applied almost in its entirety to the minimum index.

*The Aneurisms. Their Object and Effects.*

There is another peculiarity of the Challenger thermometers which leads to a slight—but only a slight—modification of this statement, viz., that at the lower end of each of the two vertical columns there is an aneurism on the tube. These form a sort of secondary bulb, making the tube faulty again after the primary bulb has been protected. Their effect is slightly to increase the effective length of the column of mercury.

I learned from Sir George Nares that the object of these aneurisms, and of another which is situated close to the bulb, is to prevent the indices from being jammed at the

bends of the stem, or forced into the bulb, when the instrument is exposed to very high or very low temperatures. They seem to be in every respect objectionable, especially as the necessity for them would be entirely removed by adding an inch or two to the length of the instrument; or, if they must be retained, by *protecting* them and using more powerful magnets. Their presence produces an effect large compared with their apparent importance. The sketch below represents, on a large scale, one of the most highly developed of the more effective of these aneurisms, that which is situated close to the main bulb of the instrument.



By reason of the convexity of the thermometer tube the diameter of the bore appears from the outside to be considerably larger than it really is. In fact a very simple geometrical construction shows that the ratio of its apparent diameter to its real diameter is that of the refractive index of glass to unity, *i.e.*, it appears to be about 1.6 times its actual diameter. So that even when the aneurism, and the liquid filling it, appear to occupy the whole diameter of the tube, they only occupy  $\frac{1}{16}$  or about two-thirds, so that even in this extreme case the walls of the aneurism are not usually very thin. The percentage diminution of volume of the middle portion of the aneurism is in such a case (roughly) 50 per cent. greater than that of the unaltered tube.

The real mischief done by the aneurism is not due mainly to thinness of the walls and consequent greater liability to distortion by pressure; it is due to the fact that the aneurism, in consequence of its greater section, contains a much larger quantity of mercury than does an equal length of the tube; and therefore that a small percentage diminution of its volume will produce a marked displacement by the outflow into the narrow tube. Several of the aneurisms I have measured produce a disturbance of the index corresponding to that produced by at least five times their own length of the tube.

In some of the more exaggerated ones it actually produces an effect on the maximum and minimum index equal to that due to the extension of very nearly one-half of the mercury column in the thermometer. But this, though easily remediable, is not a defect of much consequence. [The calculation of the effect due to an aneurism is given in Appendix B.]

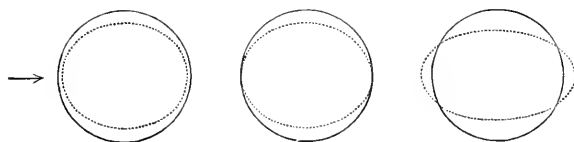
### *Imploding and Exploding of the Thermometer Bulbs.*

In connection with the breaking of some of the thermometers, as a result of pressure whether in the press or in the sea, it may be well to describe the curious nature of the

effects produced by pressure upon the material of a tube, according as the pressure is applied from without or from within.

First, with regard to the thermometers themselves, which are exposed to external pressure, but have comparatively very slight pressure applied in the interior of their bore; and second, the corresponding effect when pressure is applied, as in the press itself, from the inside and tends to stretch the walls. [This second case has occurred with one or two of the Challenger thermometers also. Its source is usually defective strength of the terminal bulb of the maximum end of the tube. This bulb implodes, then the pressure is applied to the *interior* of the protected bulb, which, in its turn, explodes.]

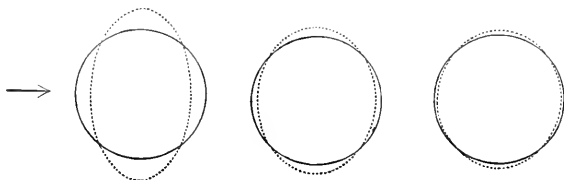
In the diagrams below, the first three figures refer to part of the walls of the glass tube, which is exposed to pressure from the outside, but has no corresponding pressure applied within. The effects of pressure indicated are those in a transverse section of the tube. The circles represent (on a large scale) transverse sections of very small spherical elements of the glass wall of the tube, the first close to the outside, the



second in the middle of the wall of the tube, and the third close to the inner surface. The ellipses which are drawn along with the circles represent (of course, with much exaggeration) the corresponding transverse sections of the ellipsoids into which the spheres are distorted by the external pressure. The sphere near the outside is compressed in all directions, but much less in a radial direction than it is in a direction perpendicular to the former. The greatest amount of compression is tangential as it were, and the circular section of the sphere has been compressed into an ellipse which has a major axis in the radial direction very nearly equal to its original length, while the minor axis is very considerably reduced. The second figure refers to a small spherical portion inside the glass wall originally situated at a distance from the axis equal to 1.6 times the internal radius of the tube. (It is curious that the number 1.6, though obtained from a totally different source, should be so nearly the same as that already quoted as the refractive index of the glass.) The little spherical element at that place suffers no radial compression, but there is considerable tangential compression. Close to the interior surface of the glass tube we find large compression in a tangential direction and actual extension in the radial direction. These diagrams have been purposely exaggerated to make the effects visible. They represent what would be the effect of a

pressure of 650 tons weight per square inch, provided glass could stand such a pressure and still continued to follow Hooke's law; and the outer radius of the tube has been taken as 2.2 times the inner. But they give all that is really required, viz., the *character* of the distortion at different points in the wall of the tube.

The next three figures represent the corresponding changes in spherical elements of the same cylindrical tube exposed to pressure from within. All portions of the tube are now extended tangentially and compressed radially, but the amount is greater on each layer as it is nearer the interior surface.



It is now easy to see how it is that a glass tube is broken by the application of pressure from without. The effect is, of course, produced first at the interior surface. For the compression is the same for every portion of the glass, but it is accompanied by shear, which increases towards the inner surface; and it is probably the resulting extension which produces the effect. But when a tube is exposed to pressure from the interior there is dilatation of the walls, which aids the shear. Thus we see why a thin tube is so much more capable of resisting external than internal pressure. It is probable that, in the case of glass, the element which first gives way is not so much crushed as torn asunder. If so, the tube which is compressed from without is in a much more favourable condition for resisting than that in which the pressure is applied internally. For, in the first, the whole substance of the walls is compressed, and thus the linear extension produced by the shear is in part counteracted. In the second, the whole substance is expanded, and the linear extension due to the shear is aided. As will be seen in Appendix A, the case of very thick tubes is considerably different.

### *Description of the Apparatus for applying Pressure.*

Sir Wyville Thomson handed over to me, with the thermometers, a press which was made for him before he started in the Challenger, and which he had carried all round the world; but when we made some preliminary experiments with it, we found it to be objectionable in many ways. It was in the first place not safe at high pressures, although an attempt had been made to strengthen it by surrounding it with massive rings of Swedish iron. As the experiments had to be conducted in College, and to a great extent by students who volunteered their services, this was a fatal defect; though I believe that

the danger from the bursting of a hydrostatic press has been usually very much exaggerated. The bursting of the cylinder itself would probably be unattended with danger; but some of the nuts and connecting pieces had occasionally been projected with great violence.

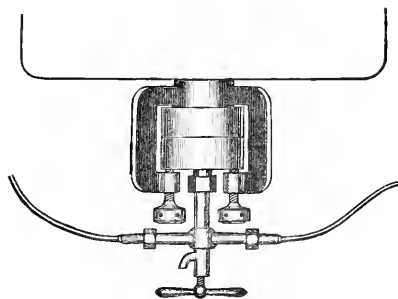
A slight numerical calculation shows that a cubic foot of water at a pressure of one ton weight to the square inch is capable of doing only about 1210 foot lbs. of work in expanding, the reason being that although the pressure is intense, the amount of compression it produces is exceedingly small. But a cubic foot of air at a pressure of a ton weight to the square inch is capable of doing nearly 1300 times as much work in expanding. Hence the danger of having large quantities of air in the press before the compression is begun.

Another defect of the apparatus was the comparatively small interior bore, which did not admit of the proper carrying out of my scheme for measuring pressures—the Bourdon gauge having shown itself quite untrustworthy. Besides, two thermometers, at most, could be exposed to pressure simultaneously, even when no gauge was inserted along with them.

The apparatus which Sir Wyville Thomson finally obtained from the Woolwich gun factories, through the intervention of the Admiralty, was in fact a Fraser gun with a few adaptations made to suit it to the purposes of the investigation. The gun, which is shown in Plate I., on a scale of one-eighth the full size, was made of a cylinder of mild steel, round which were shrunk two successive wrought-iron coils. The effective interior is  $4\frac{1}{2}$  inches in bore, and nearly 4 feet long.

This cylinder was guaranteed to be safe under pressures up to 18 or 20 tons weight per square inch, and we have for various purposes already worked up to pressures of 11 and 12 tons. [The official memorandum concerning this apparatus is given in Appendix D.]

The rest of the apparatus, to fit it for our immediate purpose, consisted of a tightly-



fitting steel plug which was forced into the upper end of the cylinder after the thermometers and other apparatus had been inserted, and the whole had been filled with

water. The plug was forced down by the weight of an assistant standing on it, while a stop-cock at the bottom of the cylinder was kept open for the escape of water, until a massive steel key could be put in through a slot in the side of the cylinder to lock the plug in its definite position.

To the lower end of the steel cylinder were adapted a series of fittings by means of which it could be connected with a powerful force-pump, and simultaneously with a gauge whose construction will be afterwards described. The gauge enabled the experimenters to know at every stage of the operation what amount of pressure had been reached in the interior of the cylinder. The pump was worked at first by hand. Of late a more powerful pump has been procured, and it can be fitted when necessary to the gas-engine of my laboratory.

Only one real difficulty was met with in working this apparatus; viz., the difficulty of making the plug fit perfectly tight. At first, when it came from Woolwich, the plug was finished by a piece of leather in the form of a cup; but this was found to leak seriously even at very moderate pressures, so that even the comparatively small pressure of a ton weight per square inch was unattainable.

But by taking off the leather from the plug and furnishing it with a ring of steel turned into cup form with an exceedingly thin and sharp edge, on the same principle as that on which the piston of the pump was constructed, this difficulty was completely got over. The flexible steel edge was pressed against the interior of the tube more forcibly the greater the applied pressure, and it was found that the apparatus was then, except under the most unfavourable circumstances, perfectly tight, at least so far as the plug was concerned. Very great care was, however, requisite in cleaning the plug and the upper part of the bore of the cylinder before each experiment. The smallest fragment of cotton-waste, getting behind the edge of the cup, almost invariably produced serious leakage when high pressure was applied. The cup form was objectionable for one reason, that it always took down a considerable quantity of air, of which it was impossible to get rid. This difficulty was overcome by putting into the cup a quantity of tallow which completely filled it up and projected considerably below it, so that the apparatus, when pressure commenced, contained at the most a few small air bubbles only.

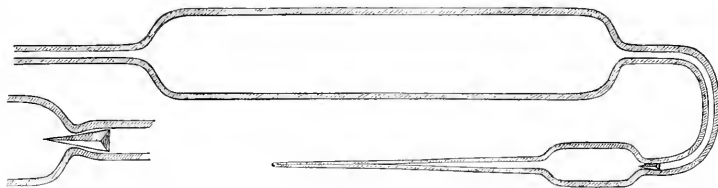
Later, when I found it was impossible to obtain certain necessary data, on account of the slowness with which pressure was got up in so large an apparatus, I procured a very much smaller apparatus of similar character, in which the cylinder was only an inch in bore, and rather less than a foot in effective interior length. With this apparatus two or three strokes, only, of the pump were required to get up the desired pressure, and there was the great additional advantage that temperatures could be independently measured by means of thermo-electric junctions. [This could not be done in the large cylinder without seriously affecting its strength, and rendering it at the same time almost unmanageable.]

*Accurate Measurement of great Pressures.*

It will be obvious from what has been said, especially as regards the old apparatus which was carried about in the Challenger, that one of the most essential requisites of the whole investigation was the accurate measurement of pressure. All the ordinary forms of pressure-gauge were found to be untrustworthy. It was necessary that in all cases the pressure should be measured with certainty to about 1 per cent. No attempt was made to secure any greater degree of accuracy, as the indications of the thermometers themselves could not in any case be trusted to less than  $0^{\circ}\cdot 1$  Fahr. It is a vain but too common custom to try to make some parts of an experimental measurement exact to a greater degree than can possibly be attained in the rest. But it is mere waste of time.

The basis on which, after a great many trials, I finally founded my determination of pressures, was Amagat's<sup>1</sup> remarkable measurements of the volume of air and other gases at high pressures. Amagat's data were obtained in the most direct and satisfactory manner, inasmuch as he measured his pressures by means of an actual column of mercury extending sometimes to 300 metres, and more. All other means of measuring pressure are as it were valueless in comparison with this. We know by these experiments the compressibility of nitrogen, and of air, up to pressures of at least  $2\frac{1}{2}$  tons weight per square inch, with almost all desirable accuracy.

All that was necessary therefore in order to determine the pressures in the operating cylinder, and thus to calibrate the gauges employed, was to compress once for all a quantity of air, measure the volume to which it was compressed and the corresponding indications of the gauges, and then by the help of Amagat's tables compute the pressure actually attained. The apparatus I employed for this purpose is figured in section in the diagram below.



This apparatus, filled with dry air, was allowed to come exactly to the temperature of the water inside the compression apparatus; then, the lower end of it being dipped into a large vessel of mercury, it was let down full of air into the compression cylinder and pressure was applied. The effect was of course to compress the air, force up the mercury until it gradually filled the vessel and forced the air entirely into the smaller bulb. After a few trials we found roughly what amount of pressure was necessary in order just to

<sup>1</sup> "Mémoire sur la compressibilité des gaz à des pressions élevées, par M. E.-H. Amagat" (*Ann. de Chimie et de Physique*, 1880).

commence the forcing of mercury into the small bulb. The mercury forced in was weighed; then the capacity of the small bulb was determined by weighing its content in mercury. The difference of these weights is the weight of mercury, which would occupy the same volume as did the air when compressed. Finally, the original volume of the air was found by weighing the whole apparatus, first empty then filled with water; and, most important in view of Amagat's results, the barometer and thermometer were carefully observed at the instant when the apparatus had its lower end placed in the vessel of mercury. Mr Kemp, who made these instruments for me, suggested and carried out the great improvement of inserting a small triangular pyramid of glass into the choked part of the bore (as shown in the small sketch). The effect is to break the mercury (which must be very clean) into exceedingly small drops. In this way the actual compression of the air was determined with a limit of error, represented at the utmost by the ratio of the volume of one of the small drops of mercury formed at the obstruction to the whole capacity of the small bulb. By working simultaneously with three instruments of this kind, even this very small error could be in great part eliminated:—and, practically, the compressions were measured far more accurately than was at all necessary for the purpose in hand. For greater accuracy a larger apparatus would be required. This, however, was quite unnecessary. And the requisite limit of accuracy in the experiment rendered it unnecessary to correct for the alteration of volume of the smaller bulb consequent on the pressure to which it was subjected.

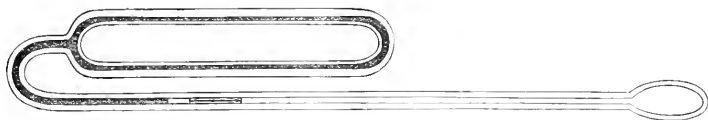
In my later experiments a long carefully-gauged tube of 1.5 mm. in bore was substituted for the small bulb. This tube was coated internally with an excessively thin film of metallic silver thrown down by sugar of milk. The process was arrested the moment the film became visible by reflection. This film is at once dissolved by the mercury up to the point which it reaches at the greatest pressure, and leaves a perfectly sharp and nearly opaque edge from which to measure. This device has proved so very successful that I have now substituted it for the indices in all the pressure gauges (shortly to be described) which are employed for very accurate measures. And I am at present engaged in measuring, by comparison of a glass gauge and an air gauge both fitted in this manner, the compression of various gases at pressures up to fourfold those applied by Amagat.

#### *Internal Pressure Gauges.*

The next step was to find some plan of construction for an instrument which, having its scale determined once for all by comparison with the air-gauge, should ever afterwards serve instead of it, thus affording a ready measure of pressure. Liquids are obviously better fitted for this purpose than solids, if only on account of their absolute homogeneity and their greater compressibility. But, unfortunately, *two* liquids must be employed, since a record must be kept:—the apparatus being surrounded on all sides by 9 inches of iron:—and, as will be seen in Appendix E, all my trials with two liquids were more

or less unsatisfactory. The very fact that I was dealing with thermometers whose bulbs were protected from pressure, at once suggested an unprotected thermometer as something perfectly well suited to the purpose so long as the glass might be trusted to follow Hooke's law. [I have since found that the invention of such an instrument, to be used as an *élatéromètre*, is due to Parrot.<sup>1</sup> His investigation of the effects of pressure is wholly incorrect, as it takes no account of distortion; but the device, and the recognition of the fact that its indications are proportional to the pressure, are wholly his.]

These instruments, which, like the thermometers, are fitted with a needle-index with hairs attached, have only one defect, which is that they act like thermometers as well as pressure gauges. That defect I managed to remove almost completely by the simple device of enclosing in the bulb a closed glass tube which *all but* fills it. The liquid then occupies only a small space between the interior tube of glass and the exterior tube forming the bulb, and is as ready as ever to give indications of pressure, while it is not in sufficient volume to be more than slightly disturbed even by a serious change of temperature.



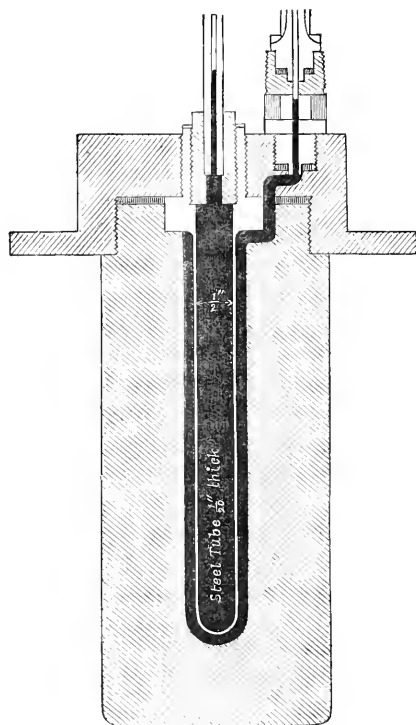
As will be seen in Appendix A to this paper, it is quite easy, by comparing two instruments of this kind in which the ratios of the internal to the external radius of the cylindrical bulb are different, to find by trial through what range its indications are strictly proportional to the pressure. Thus all the requisites of a perfect gauge, so far as the experiments required, were met by this simple apparatus. That I have obtained a sufficient accuracy in the graduation of these instruments is proved by the close agreement between my results for the volumes of air at different pressures as measured by means of them, with the volumes corresponding to these pressures in Amagat's table. If Boyle's Law had been even approximately true for these high pressures, this mode of verification would have been fallacious. It would, however, be easy to make an independent verification, by sinking some of these instruments, each thoroughly imbedded in a mass of lard (as a protection from shocks), to a measured depth in the sea. This idea is worthy of consideration, especially if the gauge be made to register by means of a silvered tube. The only probable cause of error in such a case would be the breaking of the mercury column by a jerk, and to this all other forms are at least equally liable.

<sup>1</sup> "Expériences de forte compression sur divers corps, par M. Parrot" (*Mémoires de l'Académie Impériale des Sciences de St Petersburg*, 6me Série, tome ii., 1833). The pages are headed "Parrot et Lenz" and it was by mere accident (seeking in the Royal Society's *Catalogue of Scientific Memoirs* for a reference to Lenz's thermo-electric writings) that I lit on the paper. I was much surprised at some of the statements it contains, till I found at the very end a footnote by Lenz, in which he disclaims all responsibility for the writing of the paper, and for the conclusions drawn in it.

*External Pressure Gauge.*

But it was necessary not merely to measure accurately the pressure applied, but also, for the sake of the thermometers, to provide that the pressure should not be carried too far; and for that purpose it was indispensable to have an exterior indicator of pressure.

This was furnished by a thin cylindrical steel tube enclosed in a cavity bored in a large block of iron, the interior of the steel tube being full of mercury and the narrow space between it and the large iron block also full of mercury. This exterior space was



connected with the pressure apparatus. The pressure then throughout the whole of the space exterior to the steel cylinder was the pressure in the pump. The steel cylinder was therefore compressed from the outside. In the neck of the steel cylinder, which was screwed into the surface of the block, there was luted a vertical glass tube. It was exposed to no pressure, but the mercury in it rose, by the compression of the

steel cylinder, and the height to which it rose could be easily measured. Comparative experiments were made several times by putting one of the glass gauges, whose scale had been carefully ascertained, inside the apparatus, while this newly-described gauge was also connected with it. In this way the external gauge was accurately calibrated. But, lest an accident should happen to one of the gauges, or to its index (as sometimes was the case) no experiment was made without the presence of at least three gauges. The way in which these worked together during the whole course of the experiments is the best possible proof of their value. This form of gauge, also, is greatly improved by inserting a glass tube closed at both ends into the bulb; for the temperature changes produced by pressure in mercury are greater than those in water at ordinary temperatures.

*Results of the Experiments. The true correction for pressure is very small.*

Having described the apparatus I proceed to the results. As soon as I applied pressure to the Challenger thermometers I found I reproduced pretty nearly the results obtained by Captain Davis. I had already seen one proof that at least a large part of the result was in all probability not due directly to pressure. The experiment with the long thermometer tube showed that my theoretical calculations had been correct. The question thus became:—Is this a pressure effect of any kind; and, if so, how does it originate? and if it is not a direct pressure effect, to what is it due? There are many ways of answering such questions. One answer was furnished by one of the thermometers (A 3), whose degrees (especially on the maximum side) are very short. The whole effect (in degrees) on this thermometer was not very markedly greater for a given pressure than on the others, as it would certainly have been had the effect been entirely due to pressure directly. Another is, if it be not a direct pressure effect it must be a heating effect. With Sir Wyville Thomson's permission I got from Mr Casella, the maker of the Challenger thermometers, a couple of others of exactly the same form and dimensions, but with the bulbs plugged after the manner of the gauges already described, so as to diminish their susceptibility to changes of temperature. When I put one of these into the pressure apparatus along with one of the Challenger thermometers, I found the effects on the new form very much smaller than on the old. Thus it was at once proved that the effect could not be due to wry-neckedness produced by the fitting on of the protecting bulb; which would have been an effect due to pressure directly; but that it must be an effect due to heat. That is to say, it was now completely established that the large results obtained by Captain Davis are due in the main to causes which can produce no effect when the thermometers are let down gradually into the deep sea; they are due to causes connected with the thermometers, and perhaps also with the pump, but solely under the circumstances of a laboratory experiment.

*Sources of the large effect obtained in the Press.*

Now comes the question (no longer important to the Challenger work, but of great scientific interest), What are these various sources, and how much of the effect is due to each? First of all we have seen that the water in the press is heated when pressure is applied. Using Sir William Thomson's formula I found the amount of that heating should be about  $0^{\circ}05$  F. at  $43^{\circ}$  F.,  $0^{\circ}16$  at  $50^{\circ}$ , and only  $0^{\circ}3$  at  $59^{\circ}$ , for one ton of pressure. [These numbers, as will be seen in Appendix B, are rather too small. We do not yet know to what extent the temperature of the maximum density point of water is lowered by pressure.] These cannot be expected to be fully shown under the circumstances of the experiments, and even if they were fully shown the greatest of them represents only about one-half of the whole of Captain Davis' result; there must therefore be some other cause.

I next thought of the heat produced by pumping water into the pressure vessel. That vessel, as is shown in the cut, is connected to the pump by means of a long narrow tube of copper, leading to another long narrow tube in the lower end of the vessel. These tubes were from  $\frac{1}{16}$ th to  $\frac{1}{8}$ th inch in bore, and nearly three feet in length. To estimate roughly the heat developed by the pumping, I calculated that about 300 strokes of the pump had to be made in getting up a pressure of about three tons, each stroke though about 2 feet, and with a mean or average pressure of about 20 lbs. weight. If the whole work done in that way had been expended in heating the water, the temperature effect would have been about  $0^{\circ}5$  F., as it was due to 12,000 foot lbs. of work done on about 30 lbs. of water. But this is an overestimate, and besides a very large portion of the heat actually developed is given to the pump and the connecting tubes, and much of the rest is at once conducted away by the walls of the massive cylinder, and thus the rise of temperature due to this cause is exceedingly small.

The direct compression of the thermometer tubes already referred to accounts for on the average about  $0^{\circ}25$  F. per ton pressure, so that there is still a considerable part of the whole result to be accounted for. I saw at once that it must be due in part at least to the glass protecting bulb, and perhaps also in part to the vulcanite on which the thermometers are mounted. In order to verify the latter hypothesis I took one of the Challenger thermometers and embedded the bulb of it (protecting case and all) in a mass of lard. I was sure the lard would act as a perfectly plastic body under these great pressures, and so could do no harm to the bulb. The result far more than answered my expectations, because by a pressure of not more than 3 tons the effect on the lard-covered thermometer was over  $5^{\circ}$  F.

This showed me at once that we were working in a new sort of world, where all things had properties very different from those they show under ordinary pressures, and therefore I began to think it possible that the vulcanite might have a large share in the residual effects.

In order to test the point I took one of the Challenger thermometers on which I had already made numerous concordant experiments, and removed it from its vulcanite sheath. After replacing the scale, I performed with it exactly the same experiments as before. The result was unmistakable. The effect of pressure was notably diminished by the absence of the vulcanite. This is a source of error which may differ greatly in efficiency in the different thermometers, according to the quality of the vulcanite and its exact position relatively to the protected bulb.

The remaining part of the error, due to distortion of the glass protecting bulb, has given me much more trouble than all the others together. Its amount cannot be calculated, so far as I know, for it is a case of shear and compression combined, whereas in the case of vulcanite it was a pure compression. I made some determinations, however, by opening the protecting bulb, and substituting mercury and other liquids, and sometimes air alone, for the alcohol which it originally contained. The general conclusion from such experiments was, that a small amount of the whole observed effect is due to the glass protecting bulb.

To make this more certain I surrounded the protecting bulb with a test tube filled with pounded glass, and I found the heating of this glass by compression, in spite of the heating of the glass of the protecting bulb, produced a decided increase in the observed rise of temperature.

Thus it appears that there are no less than five different causes which contribute each its share to Captain Davis' result. Of these, one is independent of the others, and would produce its full effect even if they were not present. The other four give effects which are not cumulative, and it would be very troublesome to try to assign to each its exact share of the result when two or more act together. Fortunately, it will be seen that we do not require to attempt to solve this problem.

(1.) First is the direct effect of the external pressure upon the exposed part of the thermometer tubes. This, in general, will be found very small, except in tubes where there are large aneurisms. The whole effect of 3 tons pressure on a Challenger thermometer without aneurisms, at temperatures near freezing point, so far as the minimum index is concerned, would be only about 3 one thousandths of 30 degrees or so, that is 90 thousandths or at most 0.1 of a degree for 3 tons pressure. That is an amount which, in consequence of the necessary errors of reading the thermometers, may be entirely neglected, and, unless there are large aneurisms, there will be little need for pressure corrections even in six miles of sea.

The other parts of the observed effect were

(2.) Heating of water. This I observed to follow very nearly, according to Thomson's formula, the original temperature of the water. By comparing the pressure effects on the same thermometers during summer, and during winter (for which latter the late continued frost was of particular service, and enabled me to work for many days at

the temperature of the maximum density of water), I found the results to vary in accordance with calculation.

(3.) Heat due to friction during pumping. This from its very nature was unavoidable unless we could have got an apparatus into which (by enormous pressure) the plug could have been forced directly. This could not, however, have been done in my laboratory, even if the apparatus had been adapted to such a form of experiment. But it was very easy to calculate the extreme possible amount of this effect.

(4.) The peculiar heating effect due to the vulcanite mounting. I verified this effect of vulcanite by taking a thermometer which had no vulcanite about it and measuring the effect produced upon it by a definite pressure, and then putting loosely round the bulb (in a test-tube, which had itself been previously experimented on) a small quantity of vulcanite in thin plates. I found that so little as 8 grammes of vulcanite round the protecting bulb raised the effect produced by a pressure of 3·2 tons weight from 0·5 F. to 1·1 F. The vulcanite was in thin strips about a millimetre and a half in thickness. The effect of the vulcanite on the Challenger thermometers (in the hydrostatic press) must, from the mode of their construction and mounting, in all cases be considerably greater than this.

Under these circumstances, we might without farther inquiry fairly attribute the whole outstanding effects to the massive vulcanite slabs on which these thermometers are framed. But there still remains

(5.) The most difficult question of all, the temperature effect produced by pressure upon the protecting bulb, which is under different circumstances altogether from the vulcanite; for the vulcanite is simply compressed, while the glass sheath is under pressure on one side and not on another, and is therefore subject to shear as well. In its interior the glass is extended in a radial and compressed in a tangential direction. Nobody has yet made any approximation to an answer to the question what effect in the way of heating or cooling will be produced by deformation which consists partly of compression and partly of change of form. We know that in indiarubber a cooling effect is produced by traction, and it may happen that a similar change of form in glass also produces a reduction of temperature. This is a question, however, which is not capable of answer by the help of my present apparatus;—though it will probably be answered by experiment before theory is able to touch it. The results of my experiments on the thermometers with plugged bulbs show that, on the whole, a heating effect results from the combined compression and shear in a bulb exposed to external pressure only. This has been verified by cutting down a thermometer, an exact counterpart of the Challenger thermometers but without aneurisms, taking out the greater part of the mercury and inserting a second (now a maximum) index in the minimum side of the tube. When this instrument was stripped of its vulcanite, the effect of pressure at 40° F. was considerably greater than that due to compression of the tube.

But it does not require to be taken into account so far as the Challenger thermometers are concerned.

*Final Conclusion from the Investigation.*

The final conclusion is that only one of these five causes, which are active in the laboratory experiment, can affect the Challenger thermometers when let down into the sea, namely, pressure. There is there no heating of water by compression; there is no heating by pumping; there is no heating of vulcanite, because the thermometers are let down so quickly in comparison with the rate of increase of pressure that each little rise of temperature is at once done away with as the thermometer passes through a few additional yards of water; and the effect on the protecting glass also, for the same reason, which is a heating effect on the whole, is all but done away with step by step as it is produced. All these four causes, therefore, which made Captain Davis' correction so much too large, are valid only for experiments in a laboratory press, and not for experiments in the deep sea. Therefore, as a final conclusion, I assert that, if the Challenger thermometers had had no aneurisms, the amount of correction to be applied to the minimum index would have been somewhat less than  $0^{\circ}05$  F. for every ton of pressure, i.e., for every mile of depth. All the thermometers which have large aneurisms have had special calculations made for them, but in no case does the correction to be applied to the minimum index exceed  $0^{\circ}14$  or about  $\frac{1}{4}$ th of a degree per mile of depth. [The results of the special calculation for each thermometer are given in Appendix E. These refer to temperatures about  $50^{\circ}$  F.; for lower temperatures somewhat less correction is necessary, as the part of the tube to which the effect is due is then a little shorter.]

Various singular results were met with in the course of the experiments, especially in connection with the crushing (in some cases) or the explosion (in others) of one or two of the thermometers. In one of these cases the copper tube surrounding the instrument was considerably distorted. I learn that the same thing occurred to the copper sheaths of the thermometers which were crushed in deep water during the Challenger voyage. The explanation of this occurrence will be found in Appendix D, to which I refer for the description of other singular phenomena observed during the course of the inquiry.

The preliminary experiments connected with this investigation were carried on mainly by students working in my laboratory, but all the experiments on which the preceding conclusions were founded were carried on by myself with the very efficient assistance of Mr R. T. Omond and of my assistant Mr Lindsay. I have been singularly fortunate in having at hand the mechanical skill of Mr Chalmers and the glass-blowing skill of Mr Kemp. To these able artificers I am indebted for the prompt and thorough manner in which they have executed the various novel forms of apparatus required in the course of this protracted investigation.

## APPENDICES.

### APPENDIX A.—*On the Accurate Measurement of High Pressures.*

(Mainly from *Proc. R.S.E.* 1879-80.)

In the course of an examination of some of the Challenger deep-sea thermometers, I have recently had occasion for measurements, accurate to one or two per cent., of pressures such as five or six tons weight per square inch. The ordinary gauges showed themselves to be quite untrustworthy, and it was necessary to devise some plan of whose accuracy the experimenter can feel assured. The following process has proved completely successful, and is capable of any desired degree of accuracy.

Simple methods based on the compression of gases, such as air or nitrogen, are of the highest value wherever they can be adopted; for the law of compression of these bodies is known with great accuracy (at least for one definite temperature) from the measurements recently made by Amagat, in which the pressures were directly reckoned in terms of a column of mercury. A simple form of gauge, in which the column of mercury compressing the gas into a small bulb at the extremity is made to break off at a constriction in the connecting tube, enabling us (by weighing the mercury forced over into the bulb) to measure the compression very accurately, suffices amply for all pressures up to a ton weight per square inch, or even farther.

But this instrument becomes rapidly less and less sensitive at higher pressures; so that, though the law of compression for a considerably extended range is now known, for pressures above a ton something else is required. Besides, this method is very laborious, and therefore is not to be employed oftener than is absolutely necessary.

Hooke's Law now comes to our assistance. An instrument resembling a thermometer in form supplies the next step. Its bulb is all but filled by a glass tube closed at each end, and it is thus practically unaffected by the changes of temperature produced in such experiments. Over the mercury in the stem is a long column of alcohol in which the index moves, and the rest of the tube contains alcohol vapour only. The bulb is made cylindrical for several reasons; the chief being to secure uniformity of thickness, which is practically unattainable (or at least unverifiable) in a sphere. By properly choosing the thickness of the cylinder in proportion to its bore, and its volume as compared with that of an inch of the fine tube, the sensitiveness of this gauge may be made as great or as small as we please. And, by having two or more, with bulbs of nearly the same internal dimensions, but differing considerably from one another in the thickness of the cylindrical walls, a very important advantage is secured. For, under the same pressure, the maximum amounts of distortion of the glass are greater in the thinner bulbs, and thus these begin to deviate from Hooke's Law at pressures under which the thicker ones are still following it accurately. Thus, by comparison, we can easily find through what portion of its range each instrument gives effects strictly proportional to the pressure. The thinnest of these has the unit of its scale determined by comparison with the nitrogen gauge.

When this method has to be extended to pressures such as would crush glass, recourse must be had to steel. A number of steel instruments, in their turn, can have their scale units determined accurately from one another, each from a thinner one; until we come to the thinnest, whose unit is exactly found by comparison with one of the thicker of the glass instruments. We have thus a series of gauges, each of any desired sensitiveness, capable of reading accurately pressures up to those for which steel at the interior of a thick tube ceases to follow Hooke's Law.

To illustrate this process, and to show what amount of sensitiveness is to be expected from an instrument of known dimensions, I append an approximate solution of the problem of the compression of a cylindrical tube with rounded ends. The exact solution would be very difficult to obtain, and would certainly not repay the trouble of seeking it. I content myself, therefore, with the assumption that all transverse sections are similarly distorted; which, of course, involves their continuing to be transverse sections.

Let  $\xi$  denote the displacement of a transverse section originally distant  $x$  from one end, and let  $\rho$  be the change of  $r$  the original distance of any point of the section from the axis. Then, as it is obvious that the principal tractions are along a radius, parallel to the axis, and in a direction perpendicular to each of these, we have at once<sup>1</sup>

$$\frac{d\rho}{dr} = ct_1 - ft_2 - ft_3, \quad \frac{\rho}{r} = -ft_1 + ct_2 - ft_3, \quad \frac{d\xi}{dx} = -ft_1 - ft_2 + ct_3,$$

where

$$c = \frac{1}{3n} + \frac{1}{9k}, \quad f = \frac{1}{6n} - \frac{1}{9k}.$$

Here  $\frac{1}{k}$  is the compressibility, and  $n$  the rigidity, of the material of the tube.

In addition we have for the equilibrium of an element bounded by coaxial cylinders, planes through the axis, and planes perpendicular to it,

$$t_2 = \frac{d}{dr}(rt_1);$$

and the approximate assumption above gives

$$\frac{d\xi}{dx} = \text{constant}.$$

From these five equations  $t_1$ ,  $t_2$ ,  $t_3$ ,  $\rho$ , and  $\xi$  are to be found.

They show that  $t_3$  is constant, and its value must therefore be

$$-\Pi \frac{a_1^2}{a_1^2 - a_0^2};$$

where  $\Pi$  is the pressure, supposed to be wholly external.

With the surface conditions,

$$\begin{aligned} t_1 &= -\Pi \text{ when } r = a_1, \\ t_1 &= 0 \quad \text{,,} \quad r = a_0, \end{aligned}$$

<sup>1</sup> Thomson and Tait, *Nat. Phil.* §§ 682, 683.

we determine the arbitrary constants, and it is easy to see that

$$\begin{aligned} (a) \quad \frac{\rho}{r} &= -\Pi \frac{a_1^2}{a_1^2 - a_0^2} \left( c - 2f + \frac{a_0^2}{r^2} (c + f) \right) = -\Pi \frac{a_1^2}{a_1^2 - a_0^2} \left( \frac{1}{3k} + \frac{a_0^2}{r^2} \frac{1}{2n} \right), \\ (b) \quad \frac{d\rho}{dr} &= -\Pi \frac{a_1^2}{a_1^2 - a_0^2} \left( c - 2f - \frac{a_0^2}{r^2} (c + f) \right) = -\Pi \frac{a_1^2}{a_1^2 - a_0^2} \left( \frac{1}{3k} - \frac{a_0^2}{r^2} \frac{1}{2n} \right), \\ (c) \quad \frac{d\xi}{dx} &= -\Pi \frac{a_1^2}{a_1^2 - a_0^2} (c - 2f) = -\Pi \frac{a_1^2}{a_1^2 - a_0^2} \frac{1}{3k}. \end{aligned}$$

These quantities express the change per unit of length: (a) tangentially to a cross-section of radius  $r$ ; (b) radially for the same section; and (c) longitudinally for all parts of the tube. They indicate a strain made up of two parts: a uniform compression of

$$\frac{\Pi}{3k} \frac{a_1^2}{a_1^2 - a_0^2}$$

in all directions; and a shear of

$$1 \pm \frac{\Pi}{2n} \frac{a_1^2}{a_1^2 - a_0^2} \frac{a_0^2}{r^2}$$

in the plane of a transverse section.

The diminution per unit volume of the interior of the cylinder is

$$-2 \left( \frac{\rho}{r} \right)_{a_0} \frac{d\xi}{dx} = \Pi \frac{a_1^2}{a_1^2 - a_0^2} \left( \frac{1}{n} + \frac{1}{k} \right).$$

When  $\Pi$  is a ton-weight per square inch, the value of the quantity

$$\Pi \left( \frac{1}{n} + \frac{1}{k} \right),$$

is, according to the best determinations, somewhere about  $\frac{1}{1000}$  for ordinary specimens of flint glass, and about  $\frac{1}{4000}$  for steel. This expression is very simple, and enables us at once to calculate the requisite length of bulb, when its internal and external radii are known, which shall have any assigned sensitiveness when fitted with a fine tube of a given bore. To obtain great sensitiveness, increasing the diameter of the bulb is preferable to diminishing its thickness, as we thus preserve its strength; and we have seen how to avoid the complication of temperature corrections.

It is obvious from the expressions above that the change of unit volume is the same throughout the whole of the substance of the walls of the tube, having the value

$$-\frac{\Pi}{k} \frac{a_1^2}{a_1^2 - a_0^2}.$$

But the shear is greater as  $r$  is less. Its greatest value is therefore at the interior surface, where it is

$$1 \pm \frac{\Pi}{2n} \frac{a_1^2}{a_1^2 - a_0^2}.$$

It is here that the tube first gives way to pressure, and it does so probably because of radial extension. For the expression (*b*), above, is, for glass, numerically per ton of pressure

$$-\frac{a_1^2}{a_1^2 - a_0^2} \left( \frac{1}{8100} - \frac{a_0^2}{r^2} \frac{1}{3200} \right).$$

This vanishes, or there is no radial compression, whatever be the external pressure, when

$$r = \frac{9a_0}{4\sqrt{2}} = 1.6a_0, \text{ nearly,}$$

as stated in the text above. It is worthy of notice that this expression is independent of  $a_1$ , and thus that, in all tubes, if the outer radius exceeds the inner at least in the proportion of 1.6:1, there is a cylindrical element whose thickness is not diminished by compression, and its radius is in all cases 1.6 times that of the inner bore. For all values of  $r$  less than this there is radial extension, and its utmost value is at the inner surface, where for T tons pressure it amounts per unit of length to about

$$\frac{T}{5300} \frac{a_1^2}{a_1^2 - a_0^2}.$$

From some experiments made for the purpose, I find (Proc. R.S.E., 1881) that ordinary lead glass gives way when the shear is about  $1 \pm \frac{1}{2} \frac{1}{30}$  (coupled with  $\frac{1}{60}$ th of compression in all directions). It is not clear whether it is the shear or the mere radial extension (in this case  $= \frac{1}{3} \frac{1}{60}$ ) under which the glass yields. This question is of importance when we consider internal pressure. At any rate, it follows that no tube (of this kind of glass), however thick, can stand more than about 14 tons external pressure. [The calculations here given are, of course, based on the assumption that glass accurately follows Hooke's Law until it gives way. This is certainly not quite exact, but we do not yet know the amount of the deviation. I hope to approximate to it by the comparison of gauges of different thickness. But the true effects cannot largely differ from those based on the assumed generality of Hooke's Law.]

When the pressure is internal we have

$$\frac{\rho}{r} = \frac{\Pi a_0^2}{a_1^2 - a_0^2} \left( \frac{1}{3k} + \frac{a_1^2}{r^2} \frac{1}{2n} \right), \quad \frac{d\rho}{dr} = \frac{\Pi a_0^2}{a_1^2 - a_0^2} \left( \frac{1}{3k} - \frac{a_1^2}{r^2} \frac{1}{2n} \right), \quad \frac{d\xi}{dx} = \frac{\Pi a_0^2}{a_1^2 - a_0^2} \frac{1}{3k};$$

whence the corresponding conclusions may be drawn. In particular, the increase per unit volume of the substance of the tube is

$$\frac{\Pi}{k} \frac{a_0^2}{a_1^2 - a_0^2};$$

which, in thick tubes of small bore, is very small compared with the compression produced by the same pressure applied externally. Also the increase per unit volume of the interior is

$$\frac{\Pi a_0^2}{a_1^2 - a_0^2} \left( \frac{1}{k} + \frac{a_1^2}{a_0^2} \frac{1}{n} \right).$$

In very thick tubes of narrow bore this is roughly  $\frac{\Pi}{n}$ , the value of which in glass is about  $\frac{1}{1600}$  only for one ton pressure. Also, according to the two separate hypotheses above, the utmost internal pres-

sure which a tube of common lead glass can stand is either  $8\frac{1}{2}$  or 14 tons. If it breaks by shearing alone, it is equally resisting to external and internal pressures; if by mere extension, it resists external pressure more than internal in the proportion of about 5:3.

When the pressure is the same outside and inside the cylinder, we have

$$\frac{\rho}{r} = -\frac{\Pi}{3k}, \quad \frac{d\xi}{dc} = -\frac{\Pi}{3k},$$

and the diminution per unit volume of the interior is, as in Örsted's experiment

$$\frac{\Pi}{k}.$$

The value of this in flint glass is, for one ton pressure, about

$$\frac{1}{2700}.$$

When there are, simultaneously, pressures  $\Pi_1$  external and  $\Pi_0$  internal, we have

$$\frac{\rho}{r} = \frac{1}{3k} \frac{\Pi_0 a_0^2 - \Pi_1 a_1^2}{a_1^2 - a_0^2} + \frac{\Pi_0 - \Pi_1}{2n} \frac{a_1^2 a_0^2}{(a_1^2 - a_0^2)^2}, \quad \frac{d\xi}{dc} = \frac{1}{3k} \frac{\Pi_0 a_0^2 - \Pi_1 a_1^2}{a_1^2 - a_0^2},$$

whence the increase of unit volume of the walls is at every point

$$\frac{1}{k} \frac{\Pi_0 a_0^2 - \Pi_1 a_1^2}{a_1^2 - a_0^2},$$

and the shear in the transverse sections

$$1 \pm \frac{\Pi_0 - \Pi_1}{2n} \frac{a_1^2 a_0^2}{(a_1^2 - a_0^2)^2}.$$

The increase of volume of the interior is

$$\frac{1}{k} \frac{\Pi_0 a_0^2 - \Pi_1 a_1^2}{a_1^2 - a_0^2} + \frac{\Pi_0 - \Pi_1}{n} \frac{a_1^2}{a_1^2 - a_0^2},$$

which agrees with the special results above when  $\Pi_0$  or  $\Pi_1$  is made to vanish.

For a spherical bulb the equations are reduced to

$$\frac{d\rho}{dr} = ct_1 - 2ft_2, \quad \frac{\rho}{r} = -ft_1 + (c-f)t_2,$$

$$2rt_2 = \frac{d}{dr}(r^2 t_1),$$

and we have for external pressure  $\Pi$

$$\frac{\rho}{r} = -\Pi \frac{a_1^3}{a_1^3 - a_0^3} \left( \frac{1}{3k} + \frac{a_0^3}{r^3 4n} \right).$$

As a verification of these formulæ, in addition to the simple one described in the text above, I had an apparatus constructed of ordinary lead glass of the following dimensions:—Length of cylindrical bulb, 745 mm. Ratio  $a_0 : a_1 = 87 : 21.9$ . The weight of mercury filling 424 mm. of this bulb was 167 grm. To the bulb was attached a smaller tube of which the mercury filling 68 mm. weighed 1.43 grm.

Hence we have

$$\frac{a_1^3}{a_1^3 - a_0^3} = 1.187.$$

Also the content of the whole bulb in mercury is  $\frac{745}{424} 167$  grm. = 293.4 grm. Hence a pressure of one ton-weight should force into the narrow tube  $\left( \frac{1.187}{1000} 293.4 = \right)$  0.348 grm. of mercury. This ought to displace the index through  $\left( \frac{0.348}{1.43} 68 = \right)$  16<sup>mm.</sup>55. Comparing this with the result of experiment, we had the following remarkably satisfactory numbers:—

Tons.	Calculated.	Observed.
0.9	14.9	14.6
1.4	23.1	21.2
3.1	51.3	48.9

There was no glass tube in the interior of the bulb, so that the slight discrepancies between the ratios of calculated to observed effects are mainly due to effects of temperature.

#### APPENDIX B.—*Calculation of the Effect of an Aneurism.*

The above formulæ contain all that is necessary for work of this kind. But there is one special application about which a little farther explanation is necessary.

In calculating, for the general table in Appendix E below, the effect of the aneurism nearest to the principal bulb, which is the only one of importance, I have taken the following plan.

I assumed the section of the aneurism through the axis to be bounded by a simple harmonic wave curve complete from trough to trough, which agrees very exactly with its apparent outline as seen through the wall of the tube. Hence, if  $2a$  be the greatest diameter of the aneurism,  $2b$  the diameter of the tube, and  $l$  the length of the aneurism, its volume is

$$\frac{\pi l}{8} (3a^2 + 2ab + 3b^2).$$

Or, if we write  $n$  for the ratio  $a:b$ , the aneurism adds to the volume of mercury in the part of the tube containing it an amount equal to that contained in a length

$$\frac{3n^2 + 2n + 3}{8} l,$$

of the unaltered tube.

It has been stated in the text that the diameters of the aneurism and of the bore appear magnified in the same proportion. Hence it was only necessary to measure them carefully, in terms of any common unit, by means of a small telescope with a micrometer eyepiece, in order to find the value of  $n$  in the above expression.

I have not thought it worth while to attempt the complex problem of calculating the effect of pressure on the aneurism, having simply assumed that the volumes of all parts of the bore are diminished in the same proportion, viz., by  $\frac{1}{1000}$ th for each ton-weight of pressure. This makes all my numbers in the 11th column of the table too small. But the error is of no consequence except for one or two of the instruments, in which the aneurism appears almost to fill the whole external diameter of the tube; and, even then, it will in no case affect the first figure of the tabular result. A somewhat greater error (also in defect) affects the numbers in the 10th column, for I have not taken account of the aneurisms at the bends of the tube. These are, however, in all cases much smaller than that first referred to, and the numbers for the maximum index are of no great practical importance.

#### APPENDIX C.—*Heating of Water by Compression.*

In the paper referred to in the text, Sir William Thomson gives for the rise of temperature of a fluid, the pressure on which is suddenly raised from  $p$  to  $p + \varpi$ , the general expression

$$\frac{tc}{JK} \varpi.$$

Here  $t$  is the absolute temperature of the fluid;  $c$  its coefficient of expansion, and  $K$  its average capacity for heat, under constant pressure, between  $p$  and  $p + \varpi$ .  $J$  is Joule's equivalent.

The value of  $c$ , as given by Kopp's experiments, is nearly

$$\frac{t-278}{72,000},$$

for temperatures within 20°C. of the maximum density point. The mean of the experimental determinations of Matthiessen, Pierre, and Hagen, makes it about 5 or 6 per cent. greater.

For the Centigrade scale the value of  $J$  is 1390 foot-lbs. An atmosphere of pressure is nearly 2117 lbs. weight per square foot; and  $K$  is about 63.45 (the number of pounds of water in a cubic foot).

Hence it follows that, for one additional atmosphere of pressure, the temperature of water is raised (in degrees Centigrade) by about

$$\frac{t(t-278)}{2,850,000}.$$

Now 56° F. is 13.3° C., for which  $t = 287.3$ , and the rise of temperature produced by a ton-weight per square inch is

$$0.14 \text{ C. or } 0.25 \text{ F.}$$

This is the statement in the text.

From the above formula we find the heating effect of one ton pressure on water at 50° F. to be nearly

$$0.16 \text{ F};$$

and for each degree above or below 50° F. this number must be increased or diminished by about one-tenth of its amount.

This expression is very easy to recollect, and it gives the results with ample accuracy throughout the whole range of temperatures (40°–60° F.) within which my experiments were conducted.

It is to be observed that Thomson's formula is strictly true for small pressures only. No account has been taken of a possible lowering of the temperature of maximum density, or of a change of expansibility, under pressure. Nor is it known how a considerable increase of pressure affects the thermal capacity.

#### APPENDIX D.—*The Apparatus employed.*

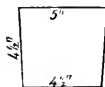
The plate appended shows in section and in elevation the Fraser gun in which the thermometers and gauges were exposed to pressure. The following memorandum from the Royal Gun Factories sufficiently explains the material, mode of construction, and dimensions of the instrument. The plate is copied from the sketch which accompanied the memorandum.

##### *“Memorandum on the Construction of Testing Cylinder for Sir Wylie Thomson.*

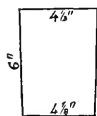
“No. 1. Interior tube is made of mild steel, similar to that used for inner tubes of guns, and containing a very small amount of carbon. The tube has been tempered in oil, and its limits of elasticity when in tension are about 30 tons per square inch. The ultimate tenacity of the metal is about 45 tons per square inch.

“No. 2. The key and plug are made of similar material, and have also been tempered in oil, and their limits of strength correspond to those of the inner tube.

“No. 3. The intermediate coils B and B<sup>1</sup> were made by coiling a bar of this section round a cast-iron mandril, and then welding this coil into a compact hollow cylinder, open at both ends, and the fibre of the iron running round and round the circumference of the cylinder.



“The exterior coil C was made in a similar manner, on a larger mandril from a bar of this section, and coiled in the reverse direction to the inner coil.



“The cylinders were then bored and turned.

“The steel cylinder A was turned .01 of an inch *larger* than the interior of the intermediate coils B and B<sup>1</sup>; the coils were then heated to expand them, and were put on to the steel cylinder and allowed to cool. When cold, the exterior of B and B<sup>1</sup> was turned .02 of an inch larger than the interior of the cylinder C, which was then heated and put on the cylinder B-B<sup>1</sup>.

“The strength of the iron of which the coils are made is about 20 tons circumferentially, and 10 tons in a longitudinal direction with the cylinder.

“No. 4 The inner steel cylinder A was subjected to hydraulic pressure *before* the outer coils were shrunk upon it, of about 2 1/2 tons per square inch, in order to test the general soundness of the metal.

"No. 5. The cylinder in its present condition may be worked with safety up to 18 or 20 tons per square inch. Of course the breaking strength, calculated in the resistance of the several parts of the cylinder, is very much greater.

"No. 6. The weights of the several parts are as follows:—

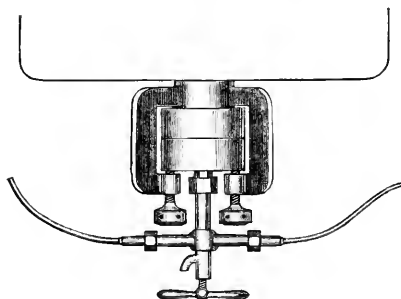
	Tons.	cwts.	qrs.	lbs.
" Cylinder, . . . . .	3	1	0	0
Key, . . . . .	0	0	3	14
Plug, . . . . .	0	0	1	27
Total, . . . . .	3	2	1	13

" 17, 2, 79.

(Signed) C. W. YOUNGHUSBAND, *M. Genl.*"

The instrument was erected in a basement room on the north side of the College, on a stone slab 18 inches thick, which was supported by a large mass of concrete imbedded in the ground below the floor, and in no way connected with the building.

A wooden platform, 3 feet 9 in. high, was erected round the instrument to facilitate access to the chamber from the top. When very high pressures were to be applied, a wooden screen, lined with sheet-iron, was erected under the platform as a defence against nuts or other pieces of metal, in case part of the lower fittings (by far the weakest part of the whole) should give way. This precaution was taken in consequence of an accident which had happened with the old pressure apparatus. Although no great pressure had been reached, a screw stripped, and the nut projected with considerable velocity.



The nature of these lower fittings will be seen at once from the woodcut annexed. A block of iron, with lateral attachments for the pump and for the external gauge, was fixed by three powerful vices to the external flange of the steel core of the pressure-chamber. It was pierced by a hole of  $\frac{1}{16}$ th inch diameter, exactly in line with the hole in the steel cylinder above. This hole was closed below by a screw-tap, so that by withdrawing the tap a steel wire could be easily passed into the pressure-chamber in case of obstructions in the narrow tube. This hole was intersected at right angles by another bore, communicating at its ends with the lateral attachments. To prevent leakage where the block was pressed against the lower flange of the steel cylinder, we first employed a leather washer. But for this we afterwards substituted a washer of block tin. This was found to work

admirably. Copper washers are employed at smaller junctions. The tubes connecting the apparatus with the pump and with the external gauge are of copper, half-an-inch in diameter, and  $\frac{1}{16}$ th inch in internal bore. The pump has a bore of 0.25 inch; and the piston, which is a solid steel rod with a sharp cup-shaped end (like the large plug) has a stroke of 2.16 inches. At the usual rate of working of the gas-engine, there are 44 strokes per minute. All these fittings were executed in Edinburgh after the arrival of the main tube from Woolwich.

The plug was supported by block and tackle from a strong beam fixed in the walls of the apartment, 5 feet above the upper end of the pressure apparatus.

The key was originally planed true to the slot, but it was deemed prudent to reduce (very slightly) its depth; lest, under great pressures, it might flex at the plug and become permanently jammed.

During the winter session, when the temperature conditions were most favourable, I was in general unable to find time for more than one experiment each day. But the great capacity of the pressure-chamber enabled me to operate on five thermometers at once, three gauges and sometimes other apparatus being also introduced. At least one thermometer was common to every two batches of five thus operated on.

The mode of conducting an experiment was as follows:—

The thermometers, gauges, &c., to be operated on had been left all night, in light tinned-iron cans, in the pressure-chamber, which was full of water. The cans were lifted out, full of water, and the thermometers and gauges were then taken out one by one and read, after the indices had been adjusted by the external magnet. The instruments having been restored to the cans, these were at once lowered into the pressure-chamber, which occasionally required to have a small additional quantity of water put in. This was taken from a vessel which had been kept standing beside the pressure vessel all night. The plug, carefully coated with a mixture of tallow and oil, was then let down into the cylinder, and pressed down by hand as far as possible. Then one of the working party mounted (by means of the tackle) on the top of the plug, which was thus gradually forced in by his weight, till it just passed the slot. At that instant another of the party opened the screw-tap below, to allow the escape of water. A third mounted on the platform, and with a marlin-spike occasionally gave a slight rotation to the plug in its descent; so that when it was home there should be a clear passage for the large steel key through the slots in the walls of the tube and in the plug. The moment that the key was shot in, the screw-tap below was closed, the external gauge read, and the gas-engine turned on. After a little practice the observer at the external gauge could give a signal to throw off the engine, so that the pumping should be stopped exactly when the desired pressure was reached.

The thermometers, &c. were then left under full pressure for about three minutes only; during which interval the pressure, when originally three tons, lost at the utmost about 1.5 per cent.—usually, however, not more than about 0.8 per cent. A pressure of three tons, when there were no air-gauges in the pressure-chamber, was generally reached in six or seven minutes. After the three minutes' interval the screw-tap was very slowly opened, so that the relaxation of pressure usually occupied from one and a half to two minutes. [When the tap was less slowly opened, the issuing stream of water was at a temperature many degrees higher than that of the iron vessel—an excellent instance of what was said in the text above about the heat developed by friction in narrow channels.]

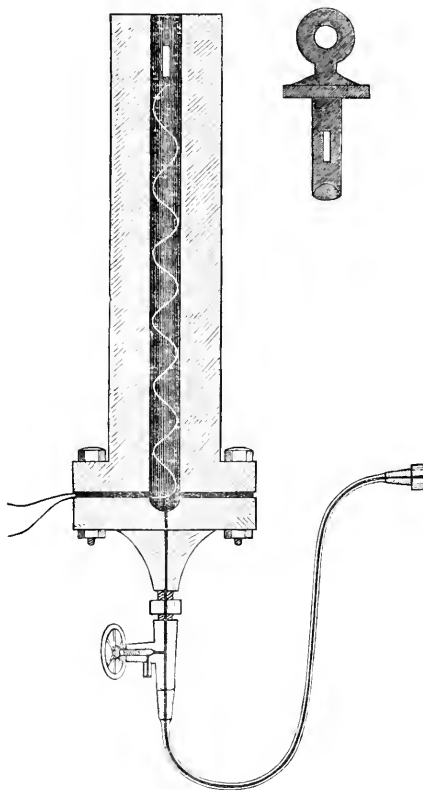
I have satisfied myself, by trials both with this large apparatus and with the smaller one soon to

be described, that, for the object I had in view, nothing was to be gained by prolonging the exposure of the instruments to pressure. A very slight additional compression might probably have resulted; but it would in all cases have produced much less effect on the thermometers than that due to changes of temperature in the room towards afternoon, especially with several persons working for a considerable time round the apparatus. This was the case when we were working at an initial temperature of  $40^{\circ}$  F., when water is not heated by pressure. When we worked at temperatures of  $50^{\circ}$  F. or upwards, it would have been vain to expect anything from protracted pressure; for the sudden rise of temperature in the water is soon greatly diminished by the good conducting power of the steel gun, and the large capacity of three tons of steel and iron, as compared with that of 25 lbs. of water. Thus the mercury in the thermometers falls away from the index,—so that, even if a farther compression took place under continued pressure, the index would not be affected by it. This cooling explains, to a great extent, the apparent leakage described in last paragraph.

After the pressure had been let off, our most formidable difficulty presented itself, viz., the extraction of the plug with as little as possible of a jerk, and (especially when there were air-gauges in the instrument) with as little exhaustion of pressure as possible. To do this with perfect steadiness, and with the requisite slowness imposed by the great length and very small bore of the lower aperture, a powerful screw-jack would have been required. But, though I have an instrument of the kind, I determined to do as well as I could without it, as the necessary fittings would have been not only expensive, but exceedingly cumbersome, and would have greatly extended the time required for each experiment. The method adopted was to haul the tackle tight, but not so tight as to start the plug; and then, by pinching two laps of the chain together, to produce the desired result. There was always about  $\frac{1}{3}$ th or  $\frac{1}{4}$ th of the air sucked out in this way from our air-gauges, except when we took the precaution of putting into the chamber before commencing operations a large inverted vessel full of air. This works well enough in some respects, but it is objectionable for several reasons, especially the heat developed in compressing air. Another mode was to force out the plug by reapplying pressure after the key had been extracted. This was, of course, a very tedious operation as, even when no air-gauges were in the apparatus, at least 900 strokes of the pump were required:—for the section of the plug is 16 square inches, and it had to be raised 5.6 inches, the pump inserting  $\frac{1}{10}$ th of a cubic inch of water at each stroke. Any other mode of meeting this difficulty would have involved a weakening of the apparatus, which could not be permitted.

The smaller pressure apparatus, already alluded to, is figured in section in the woodcut. Its bore is one inch in diameter; and its content, when the plug is in, is about nine cubic inches. A single stroke or two of the pump only is required to produce in it a pressure of three to four tons. The important feature in its construction is the large flange by which the lower end, with its fittings, is attached. Between the flanges two large leather washers (carefully soaked in wax) are compressed by means of six powerful screws. Their object is to enable us to insert a thermo-electric junction in the pressure-chamber, the other junction of the circuit being outside. In the sketch the covered wires (copper and iron of 23 gauge, two of each metal) are seen twisted together and extending up the chamber in a cork-screw form with the junction at the top. This arrangement enables the experimenter to raise the junction above the top of the cylinder when he wishes to fit it into a mass of any substance which is to be tested for the heat developed by compression. The wires pass out, each by itself, and are laid in a serpentine form between the leather washers. A day or two after it was first set up, this apparatus leaked considerably at the flange, but by tightening the screws a second time it was made, and still remains, almost perfectly water-tight even up to five and six tons pressure.

By means of this apparatus I have measured directly the rise of temperature, produced by pressure, in a great variety of substances. Some of my results will be found in the *Proc. R. S. E.*, May 1881. I do not insert them here, but content myself with mentioning that they fully bear out the results already obtained with vulcanite and lard by means of the larger apparatus.



One or two other remarks as to the behaviour of the thermometers under pressure may conveniently be inserted here, as they serve to explain some of the results obtained during the expedition.

On the first occasion on which one of the thermometers gave way, we were much surprised at the loudness and musical quality of the sound produced. The whole mass of iron and steel vibrated like a bell in consequence of the (comparatively slight) sudden relaxation of pressure. On another occasion, just as a pressure of three and a half tons had been reached, the whole apparatus gave a strong, protracted musical sound, which continued until the screw-tap was opened. This was

probably due to a species of hydraulic-ram behaviour on the part of one of the valves of the pump. These are little conical pieces of steel, with the points much elongated, which are ground accurately into conical beds, and fall back into their places by gravity. It was not observed that this powerful vibration had in the least degree altered the position of the indices in the thermometers or gauges which were in the pressure-chamber. Their indications agreed perfectly with those of the preceding and succeeding day.

I made a number of experiments with the view of determining the amount of distortion at which glass gives way, with the view of finding the limit of strength of a glass tube, and also the ratio of external to internal diameter to secure it against any assigned lower pressure.

The approximate results of these experiments is given in Appendix A, but I allude to them now in consequence of a curious fact observed, which gives the explanation of a singular occurrence noticed on board the Challenger. The walls of the tubes, when they gave way, were crushed into fine powder, which gave a milky appearance to the water in the compression apparatus. But the fragments of the ends were larger, and gave much annoyance by preventing the valves of the apparatus from closing. To remedy this inconvenience, I enclosed the glass tube in a tube of stout brass, closed at the bottom only, but was surprised to find that it was crushed almost flat on the first trial. This was evidently due to the fact that water is compressible, and therefore the relaxation of pressure (produced by the breaking of the glass tube) takes time to travel from the inside to the outside of the brass tube; so that for about  $\frac{1}{100000}$ th of a second that tube was exposed to a pressure of four or five tons weight per square inch on its outer surface, and no pressure on the inner. The impulsive pressure on the bottom of the tube projected it upwards, so that it stuck in the tallow which fills the hollow of the steel-plug. Even a piece of gun-barrel, which I substituted for the brass tube, was cracked, and an iron disc, tightly screwed into the bottom of it to close it, was blown in. I have since used a portion of a thicker gun-barrel, and have had the end welded in. But I feel sure that an impulsive pressure of ten or twelve tons weight would seriously damage even this. These remarks seem to be of some interest on several grounds, for they not only explain the crushing of the open copper cases of those of the Challenger thermometers which gave way at the bottom of the sea, but they also give a hint explanatory of the very remarkable effects of dynamite and other explosives when fired in the open air. [It is easy to see that, *ceteris paribus*, the effects of this impulsive pressure will be greater in a large apparatus than in a small one].

#### APPENDIX E.—*Tabular Synopsis of the General Results of Experiment and Calculation.*

The first four columns of the table give the numbers by which the various thermometers were distinguished; 1 in my Laboratory, 2 on board the Challenger, 3 by Captain Davis, 4 by the maker Mr Casella.

The series of thermometers A 1, . . . A26, though they were used on board the Challenger, are the private property of Sir Wyville Thomson, and were not uniformly stamped, as were the Challenger thermometers proper, with their numbers on the copper cases. Hence, when they were obtained from Captain Tizard, it appeared necessary to put on some distinguishing mark, and the titles X, LV, +, &c. were the chance devices on little tablets which were at once affixed to each of the instruments which had no outward distinguishing mark. I have since found the means of recognising, without uncertainty, each of the instruments.

The fifth column gives the correction supplied to the Admiralty by Captain Davis for those thermometers which he tested. The correction is, in all cases, for 2500 fathoms. With reference to the numbers in this column, the following extract from a letter addressed to me by Captain Tizard (of date 11th January 1881) must be kept well in view :—

“The method employed by Captain Davis, in experimenting on the thermometers, was to place in the press, with the instruments on trial, one of Phillips’ thermometers, enclosed in a tube on Sir William Thomson’s principle. He took it for granted that this perfectly enclosed thermometer would not be affected by pressure; but that any alteration of its index would be due to the generation of heat in forcing the water into the press. The alteration of its index, which was always of very small amount, was deducted from the alterations in the indices of the instruments on trial, and the differences assumed to be the errors of the thermometers at a given pressure. But, as I mentioned to you before, this alteration was always on the maximum side of the tube, and not the minimum. Consequently it appeared to us to require considerable modification.”

On this it is necessary to remark that the indication of the Phillips’ thermometer (as is obvious from the text above) is not due to heating of the water in the press alone, but also to the heating effect of pressure upon the strong protecting tube. Thus I have no direct means of comparing my results quantitatively with those given by Captain Davis.

Under the circumstances, I have done what appeared to me best for obtaining a rough comparison. I have given in column 7 the observed effects of a pressure of three tons (nearly 2500 fms.) on each thermometer. In column 8 the temperatures are given, and in column 9 the corresponding temperature-change (by Thomson’s formula.—Appendix C, *ante*). Column 6 gives the differences of the numbers in columns 7 and 9; and these differences may be roughly compared with those of Captain Davis in column 5. There is a general agreement, but my reduced numbers are, on the whole, rather greater than those of Captain Davis.

This may be ascribed, in part, to the fact that in Captain Davis’ apparatus (as I understand) the water was pumped in *from above*, and thus the heat developed by friction did not affect his results. And it may be due in part to inadequate measurement of pressure,—a point which was impressed on me from the very commencement of my work. I have learned from Mr Casella that the pressure gauge employed by Captain Davis has been broken; so that it is impossible now to verify his scale of pressures. To show how possible is a serious mistake in this matter, I append a comparison of the indications of the very elaborate gauge attached to the old Challenger apparatus with those of my steel external gauge already described. The scale of the Challenger gauge is divided to cwt. on the square inch. My gauge gives very nearly 20 mm. per ton; so that, for a rough comparison, we may take 1 mm. as equivalent to 1 cwt. The two instruments were simultaneously attached to the pump, and the pressure was therefore the same in both at each reading. There can be no doubt whatever, from repeated comparisons with glass gauges of all sizes and shapes, that my gauge follows Hooke’s law with great accuracy. The only possibility of serious error is in the actual value of the unit. This important determination has, however, been very carefully repeated by the aid of Amagat’s numbers and the indications of the silvered gauge already described; and the result is as above stated.

Steel Gauge, Millimetres.	Challenger Gauge, Cwts. per sq. in.	Ratio.
0	0	∞
5	0	0.0
9	1.2	0.13
15	8.7	0.58
20	13.9	0.69
30	23.6	0.78
40	35.0	0.87
50	47.0	0.94
60	58.7	0.98
70	71.7	1.02

The comparison was repeated several times with almost exactly the same results.

It is quite clear that the Challenger gauge does not follow Hooke's law. It lags behind the steel gauge at first (does not give any indication, in fact, till the pressure is nearly 50 atmospheres), then gradually gains on it; and, at pressures greater than  $3\frac{1}{2}$  tons, appears to leave it rapidly behind. The instrument is, however, graduated up to 4 tons only. My very first experiments with this Challenger instrument, in which I used a simple form of manometer, showed that it was not trustworthy, and led me to make various trials for the purpose of getting a proper mode of measuring high pressures.

[Inserted, July 8, 1881.—After recently examining a number of gauges of the Bourdon pattern, some constructed to read to 600 atmospheres, I again tried the old Challenger gauge. The result was very remarkable. Four successive trials agreed very closely with each other in giving

Steel Gauge, Millimetres.	Challenger Gauge, Cwts. per sq. in.	Ratio.
0	0	∞
10	10.6	1.06
20	20.3	1.02
30	31.0	1.03
40	42.8	1.07
50	54.1	1.08
60	65.7	1.09
70	78.7	1.12

A comparison of these, with the numbers of the former trials, shows that all the readings are increased by somewhere about 7 cwts. This seems to show a definite slip of one of the bearings, or possibly a new arrangement of the teeth gearing with one another in the two toothed arcs. But whatever be the cause, the untrustworthiness of the gauge is obvious.]

Columns 10 and 11 give the pure pressure effect on each of the thermometers, as calculated from the measured dimensions of each instrument and of its principal aneurism by the help of the formulæ in Appendices A and B. The numbers given for the maximum side of each instrument are all slightly too small, as I have not allowed for the effects of the (comparatively trifling) aneurisms at the bends of the tube. Those given for the minimum side are the only ones of real importance; and, in calculating these, all accessible details have been carefully attended to. One or two of the instruments were entirely smashed, so that no trace of the main aneurism was left. In such a case the correction has a + inserted after it. In the other broken instruments the aneurism was still measurable, and the correction has been adequately determined.

The remaining columns of the table give the scale errors of the thermometers at 50° F. These were determined casually in the course of the work, by comparing with a Kew Standard the thermometers for trial next day, which were (for this purpose) kept for some hours in a steady stream of water.

These numbers are not given as exact, though they are probably very near the truth. I have noticed that the scale error, in a thermometer with two liquids in contact, varies within considerable limits at any one temperature, according as the thermometer has been *raised* to that temperature from a lower one, or *cooled down* to it from a higher. I found an excellent illustration of this in some of my glass pressure-gauges, where (for the purpose of allowing the interior plug to be seen) I at first employed a transparent liquid in the bulb, with a short column of mercury in the stem to move the index. In some of these instruments, after they had been several times exposed to high pressures, a film of the transparent liquid entirely surrounded the column of mercury, which could then move pretty freely, even in the narrow tube, under the action of gravity. Of course this mode of construction was at once given up.

There seems to be no necessity for the printing of the records of the very numerous experiments which have been made on the various thermometers. In the text above, I have said enough to show that the true pressure correction to be applied to the deep sea observations is exceedingly small, and in column 11 of the annexed table it is calculated with all necessary accuracy. I have already said that no fair comparison can be drawn between the numbers in columns 5 and 6. There is a general resemblance between them, and that is all that could be expected where the modes of obtaining them were so different.

As regards the numbers in column 7 of the table, the remainder, when the corresponding number for the maximum index in column 10 is subtracted, ought to be nearly the same for all the thermometers if the vulcanite supports and cover were similarly applied to each. The differences among them are mainly due to this cause, and it is somewhat surprising to find that they are so nearly alike.

I have so often mentioned Amagat's determinations of the volume of air at different pressures, as the basis of the whole of my measurements, that it is well to give, as I have done in fig. 3 of the plate, a graphic representation of them. The horizontal axis gives pressure of air in atmospheres,—the vertical gives the corresponding densities, or (what comes to the same thing) the pressures calculated from the densities by assuming the truth of Boyle's law. It will be seen that the straight line, which would represent densities in terms of the actual pressures, if Boyle's law were true, lies *below* the curve at first:—*i.e.*, air is more compressible at first than Boyle's law would make it. At about a ton, (or rather 140 atmospheres,) its volume is exactly that which Boyle's law would give; and at higher pressures its compressibility falls farther and farther short of that assigned by the law. But the error caused by assuming Boyle's law to hold good up to one ton pressure is, at its greatest, only about 1 per cent.; and this occurs considerably under 100 atmospheres. Practically, my gauge unit was determined at pressures at which Boyle's law is almost exactly true.

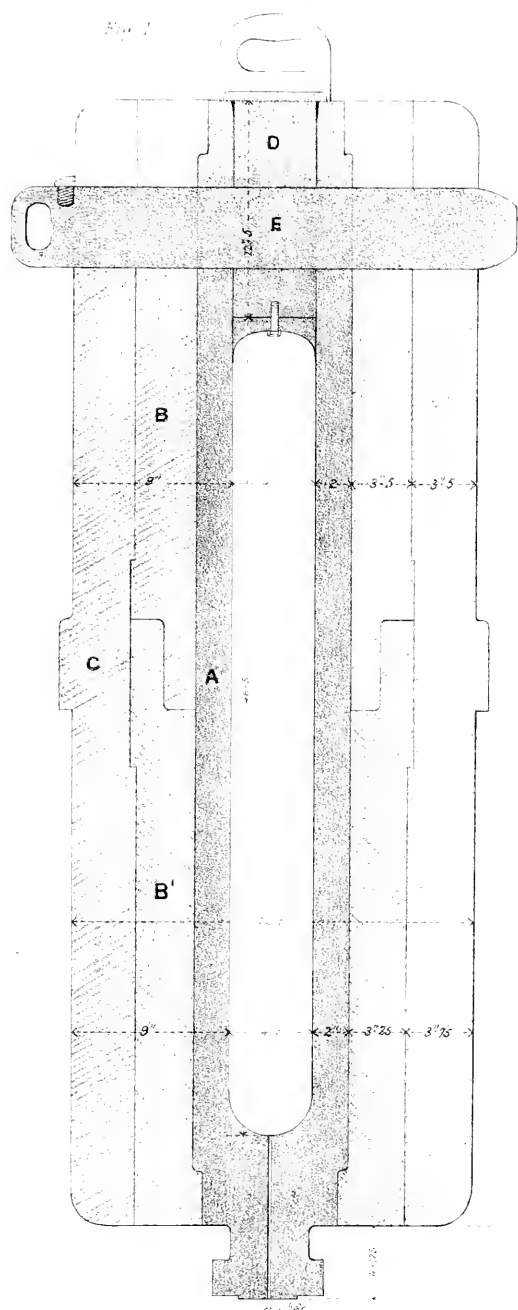
Finally, it may be interesting to mention that a fairly approximate determination of the compressibility of water was made by counting the number of strokes of the pump required to produce a measured pressure in the interior of the large apparatus.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Laboratory Number.	Challenge Number.	Capt. Davis' Number.	Maker's Number.	Capt. Davis' Correction for 2500 fathoms. (Negative).	Effect of a Pressure of 3 tons, at temperature in next column.			Temperature.	Boiling of water by 3 tons pressure, at temperature in last column.	True Pressure Corrections for 3 tons, at 50° F., calculated from the dimensions of each instrument, and of its principal aneurism. (Negative).		Rough determination of scale-error, at 50° F., the indices being drawn away from the mercury.		Remarks.
										Maximum.	Minimum.			
71	71	71	17,429	1.3	1.36	2.1	55	0.71	0.82	0.31	-0.6	+0.7		
72	72	72	18,126	1.4	...	...	...	...	0.72	0.26	...	...	{ Imploded, 14/5/80. Aneurism preserved.	
77	77	77	18,142	1.5	1.5	2.3	56	0.8	0.80	0.35	(+0.5)	-0.1	{ Mercury slightly broken on maximum side.	
81	81	81	17,911	1.3	1.46	2.2	55	0.71	0.70	0.36	-0.5	+0.3		
83	83	83	18,059	1.5	1.48	2.2	54.5	0.72	0.70	0.26	+0.5	+0.75		
94	94	94	17,715	1.1	1.3	2.1	56	0.8	0.57	0.22	-0.2	+0.1		
A 1	A 1		17,505	...	1.5	2.1	52.5	0.6	0.62	0.25	0.0	-0.45		
VII.	A 2		17,714	...	...	...	...	...	0.68+	0.18+	...	...	Completely smashed, 6/7/80.	
A 3	A 3		17,718	...	1.56	2.4	57	0.84	0.88	0.25	-0.1	-0.5		
IV.	A 5		17,707	...	1.6	2.2	52.5	0.6	0.62	0.21	-0.15	-0.25		
X.	A 7		17,712	...	1.5	2.2	54	0.7	0.76	0.39	-0.05	+0.05		
A 8	A 8		17,721	...	1.3	1.9	52.5	0.6	0.50	0.18	+0.05	-0.15		
XX.	A 9		17,709	...	1.58	2.4	56.2	0.82	0.86	0.41	+0.1	+0.1		
VIII.	A 10		17,706	...	1.28	1.9	53	0.62	0.77	0.31	0.0	-0.25		
A 11	A 11		17,702	...	1.3	2.1	56	0.8	0.70	0.24	-0.2	-0.2		
+	A 12		17,903	...	1.6	2.3	54	0.7	0.80	0.31	-0.15	+0.15		
* Nil.	A 13	Not examined by Capt. Davis.	17,908	...	...	...	...	...	0.77	0.33	...	...	{ Exploded after mending, 17/7/80. Captain Tizard records it broken, 23/3/75	
VI.	A 15		17,889	...	...	...	...	...	0.61+	0.2+	-0.4	+0.4	Completely smashed, 9/7/80.	
A 16	A 16		17,904	...	1.78	2.4	53	0.62	0.76	0.31	+0.15	0.0		
LI.	A 17		17,704	...	...	...	...	...	0.62	0.22	+0.05	0.0	{ Maximum index sticks, and mercury passes it.	
A 18	A 18		17,479	...	1.5	2.1	52.5	0.6	0.61	0.29	-0.15	+0.25		
A 19	A 19		17,914	...	1.38	2.2	56.5	0.82	0.72	0.29	+0.15	-0.05		
XI.	A 20		17,901	...	1.33	2.05	54.5	0.72	0.66	0.26	+0.45	+0.65		
IV.	A 22		17,909	...	1.3	2.1	56	0.8	0.69	0.32	-0.1	-0.7		
* III.	A 24		17,441	...	1.7	2.5	56	0.8	0.76	0.36	0.0	+0.7		
A 25	A 25		17,906	...	1.4	2.2	56	0.8	0.76	0.32	-0.2	+0.1		
0-1	0-1		23,321	1.2	1.18	1.8	53	0.62	0.57	0.29	+0.05	+0.05		
0-2	0-2		23,325	1.0	0.86	1.6	55	0.71	0.56	0.18	+0.1	-0.3		
0-5	0-5		23,329	1.0	1.3	1.9	52.5	0.6	0.52	0.21	+0.25	-0.15		
0-6	0-6		23,330	1.0	1.28	1.9	53	0.62	0.61	0.28	+0.05	+0.25		
XXIII.	...	...	37,741	...	0.94	1.7	55.5	0.76	0.44	0.13	+0.3	+0.2	{ This is in all respects like the others, except that there are no aneurisms.	

Nil and III were handed to me by Mr Murray; XXIII came direct from Mr Casella. The remainder were sent to me by Captain Tizard.

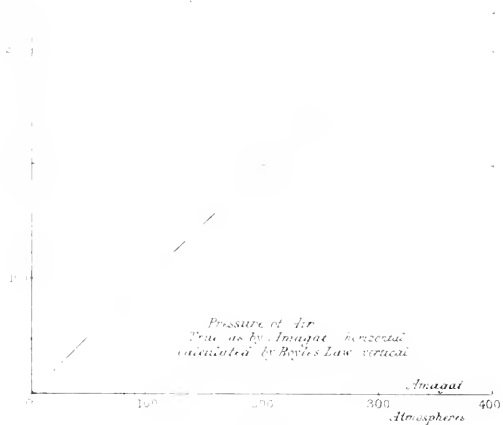
Scale 1 inch = 1 ft

Fig 1



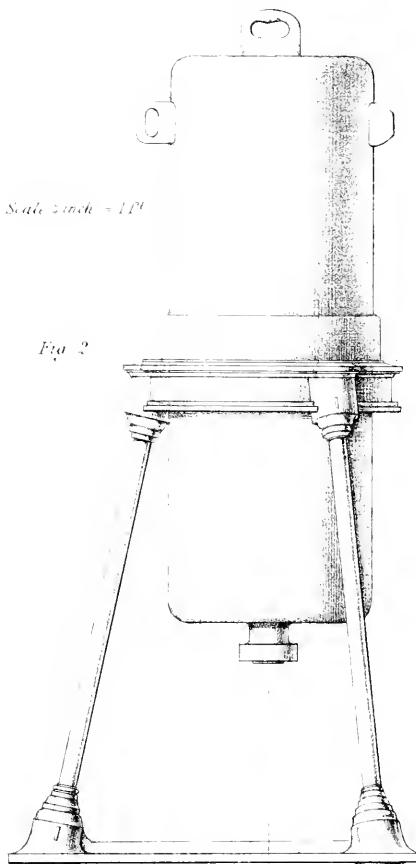
Scale 1 inch = 1 ft

Fig 3



Scale 2 inch = 1 ft

Fig 2





THE  
VOYAGE OF H.M.S. CHALLENGER.

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REPORT on the PETROLOGY of the ROCKS of ST. PAUL (Atlantic).

By the Rev. A. RENARD, F.G.S., F.R.M.S., &c.

THE object of the present Report is to give a lithological description of the specimens collected on the island during the voyage of the Challenger. Numerous and carefully-selected specimens of these rocks were forwarded to me from the Challenger Office for the purpose of minute petrographical investigation and description. They were accompanied by a complete series of microscopical sections prepared by Mr. Murray. I received at the same time the chemical analyses of the principal specimens which had been made by Professor Brazier, of Aberdeen, at the request of Sir Wyville Thomson. These analyses have been inserted in the text of the report.<sup>1</sup>

The description of this rock-mass, standing as it does apart in the mid-Atlantic, is in every way worthy the attention of geologists. The position of this islet, far removed from any continent, lost as it were in the middle of the ocean, caused it to be considered as the last trace of some vast districts lost by submergence. In the hypothesis of an Atlantis the island of St. Paul is one of the peaks belonging to the continental masses that formerly existed between the Old World and the New, and which united those islands now separated by the ocean, but which certain relations in their fauna and flora have led some naturalists to consider as at one time united. With this revival of the idea entertained in ancient times by the Greeks and the Phœnicians regarding the Atlantis, it was admitted, on the ground of the distribution of living beings, that there formerly existed north of the Equator a continental mass, of which the present groups of islands scattered through-

<sup>1</sup> After completing this report I wished further to prove some of the conclusions at which I had arrived, by making a fresh analysis on a specimen which I had used in my studies. My friend Dr. L. Sípőcz kindly undertook to do this for me, and the result of his investigations will be found in the present work. The analyses of Prof. Brazier are indicated by (B) in the text.

out that region are mere traces. It was also believed that land existed to the south, nearer the Equator, between South America and Africa.<sup>1</sup> But, as Sir Charles Lyell rightly observes,<sup>2</sup> the speculations and theories of the zoologist or botanist as to the manner in which these islands were peopled with living beings, must necessarily be most imperfect, so long as we possess no accurate knowledge of their lithological structure and composition.

Now, the researches of the geologist tend to establish the fact that these islands, formerly considered as united, are essentially of volcanic formation, and, moreover, the authority just quoted affirms that nowhere among the Madeira and Canary Islands could he detect any signs of subsidence, or even of the temporary emergence of old continental surfaces. Do the rocks of St. Paul owe their origin to volcanic action, or must they be classed among the rocks belonging to the crystalline schists? Such is the question they suggest, which is the more difficult to solve, because we have as our guide only the examination of some specimens, and cannot take into account the relationship between formations in the reefs of St. Paul and adjacent rocks. What still further increases the difficulty is that the type to which the rocks of St. Paul belong appears in certain cases with the characteristics of eruptive rocks, and in others with those of crystalline schist.

It is well known that in the hypothesis of an Atlantis, St. Paul is looked upon as having belonged to that continent.<sup>3</sup> The position of the island in mid-Atlantic, together with the aspect and lithological character of the rocks composing it, were calculated to mislead as to its origin. At first sight the Rocks of St. Paul offer but little analogy in their structure and mineralogical character to the volcanic material which, with coral reefs, forms almost all the smaller oceanic islands; and Darwin, to whom we are indebted for so many important observations regarding the formation of oceanic islands, struck by the peculiar character of this mineral mass, denied its volcanic origin. Speaking of St. Paul, he says:—"It is a remarkable fact, that all the many small islands in the Pacific, Indian, and Atlantic Oceans, with the exception of the Seychelles and this little point of rock, are, I believe, composed of coral or of erupted matter. The volcanic nature of these oceanic islands is evidently an extension of that law, and the effects of the same cause, whether chemical or mechanical, from which it results that a vast majority of the volcanoes now in action stand either near the sea-coasts, or as islands in the midst of the sea."<sup>4</sup> Further, he has expounded his opinion in a formal manner when he says—"St. Paul is not of volcanic origin, and this circumstance, which is the most remarkable in its history (as will hereafter be referred to), properly ought to exclude it from the present

<sup>1</sup> See Boué, Ueber die Rolle der Veränderungen des unorganischen im grossen Maassstabe in der Natur Sitzung-berichte der wien. Akad. der Wiss., 1866, pp. 12-14.

<sup>2</sup> Lyell, Principles of Geology, 11th ed., vol. ii. p. 406.

<sup>3</sup> Cf. Boué, *loc. cit.*, p. 14.

<sup>4</sup> Darwin, Voyage of a Naturalist, p. 8.

volume."<sup>1</sup> I am inclined to think that the passages just quoted have served as the chief, if not the only ground for considering the rock-mass of St. Paul as belonging to some continent now submerged.<sup>2</sup>

The mineralogical composition and microscopic structure of these rocks are no less interesting to the petrographer than the mode of their formation is to the geologist. As I shall presently show, they are almost exclusively composed of granular olivine; they may be even considered as one of the most remarkable types of olivine rocks recently brought to light.

Previous to the researches proving the existence of rock-masses essentially composed of olivine, the presence of this mineral had been observed in basalts, dolerites, melaphyres, and some other igneous rocks; it was likewise found in granular limestones, tale-schists, &c., &c. But it is only since the researches of Damour and Des Cloizeaux on the lherzolite, of Hochstetter, on dunite (a compact olivine rock of New Zealand), that the peridotites or rocks formed essentially of olivine were acknowledged as constituting a petrographic type.

Researches made within the last few years have shown that these rocks are of more frequent occurrence than was at first supposed; and we have now in the specimens from St. Paul a type of peridotite remarkable for the purity of its composition, and the very slight alteration it has undergone.<sup>3</sup>

Before entering on the lithological description of the rocks I will briefly describe their position, borrowing chiefly from the information supplied by the preliminary reports of the Challenger Expedition.

The island of St. Paul is situated very nearly under the Equator, being in lat. 0° 58' N., and long. 29° 15' W. It is about 540 miles distant from the coast of South America, and some 350 miles from the island of Fernando Noronha, about half way between the coasts of Africa and of South America.

The group of rocks consists of five peaks, divided into four principal masses, separated by three narrow channels. In shape they resemble a horse-shoe, and stand round a basin, or bay, which they enclose. Towards the base the rocks are black, but their

<sup>1</sup> Darwin, *Volcanic Islands*, p. 32.

<sup>2</sup> Boué, *loc. cit.*, p. 12.

<sup>3</sup> It is not the first time that the presence of an olivine rock, more or less altered, has been observed in the Atlantic islands. Darwin, in his *Volcanic Islands*, p. 18, states that at St. Jago and Quail Island, Cape Verde, he found considerable masses of wacke, which he describes as a pale yellowish green argillaceous substance, of a crumbling structure when dry, but unctionous when moist. In its purest form it presents a beautiful green tint, with translucent edges; it has occasionally obscure traces of an original cleavage. It seemed to him, at first, that this wacke came from the decomposition of an augitic mineral. This opinion was founded upon its pyrognostic characters, and the presence of augite in the basalt associated with this green material. However, having examined the stages of decomposition of the olivine contained in the basalt, he found that he could trace a nearly perfect gradation from the unaltered olivine to the green material he called wacke. The pyrognostic characters served to confirm this opinion. What struck him most forcibly was, that a mineral considered infusible should yield by decomposition a product perfectly fusible.

summits are of a yellowish colour. The whole ridge is excessively rugged.<sup>1</sup> They were visited during the cruise of the "Beagle" in 1832, and again by Sir James Ross during the cruise of the "Erebus" in 1839; and later, on the 23rd August 1873, by the Challenger Expedition. Their greatest length, from one end of the group to the other, is under a quarter of a mile. Their diminutiveness is one of the features that most impress those who visit the island. Their greatest altitude does not exceed 60 feet. Darwin says:<sup>2</sup>—"They rise abruptly out of the ocean, and, except on the western side, soundings were not obtained, even at the short distance of a quarter of a mile from the shore."

The barrenness of these rocks is remarkable, as neither plants nor even lichens grow on them. I may here mention that this barrenness is one of the characteristics of all olivine and serpentine rock-masses. The rocks of St. Paul are almost destitute both of flora and fauna, as observed by Darwin and Sir Wyville Thomson, who paid particular attention to the natural history of this island.

Darwin, speaking of the lithological characters of this group of rocks, describes it as follows:<sup>3</sup>—"It is composed of rocks unlike any which I ever met with, and I cannot characterise them by any name. One of the most abundant kinds is a very compact, heavy, greenish-black rock, having an angular, irregular fracture, with some points just hard enough to scratch glass. Specimens are found of a less deep green, but whose crystalline structure is more marked, that are translucent on the edges, and fusible to a green enamel." He considered the northern rock of the group to be formed of a sort of "harsh stone," which breaks up into fragments so regular as to be mistaken for blocks of altered orthoclase. Darwin, moreover, saw what he considered to be veins of serpentine running through the whole mass. The observers of the Challenger Expedition have, like Darwin, classed these rocks of St. Paul as serpentine, and we shall soon see that in doing so they have placed them very nearly in the class they should occupy in the lithological series. Sir Wyville Thomson<sup>4</sup> insists on the resemblance between these rocks and the serpentines of Cornwall and Ayrshire, while he admits that they differ very much from them in certain marked characteristics. They do not appear to him, however, to bear any resemblance to modern volcanic rocks. Mr. Buchanan<sup>5</sup> ascertained during the voyage of the Challenger that the rock contained magnesia, alumina, and peroxide of iron, and that many specimens gave out water in the closed tube. The naturalists who visited the island have drawn attention to the fact that the rocks to the south are covered over with a substance that gives them at a distance a dazzling white appearance. This is due in

<sup>1</sup> Sir Wyville Thomson, *Voyage of the Challenger*, vol. ii. p. 106; Moseley, *Notes of a Naturalist on the Challenger*, chap. iii.

<sup>2</sup> Darwin, *Volcanic Islands*, p. 32.

<sup>3</sup> *Ibid.*

<sup>4</sup> Sir Wyville Thomson, *Voyage of the Challenger*, vol. ii. p. 106.

<sup>5</sup> J. Y. Buchanan, *Proc. Roy. Soc.*, cvii. 1876, p. 613.

part to the excrements of an immense multitude of sea-birds that gather on the rocks, and in part to a coating of a white, hard, brilliant material, which I shall describe at the end of this report.

Having thus summarily disposed of the facts already made known by the naturalists who have visited St. Paul, I will now enter on a minute description of its rocks. It will be noticed, as we proceed, that some of their characteristics have already been pointed out by the authors I have quoted, but no reliable classification could be attempted until a careful microscopic study and chemical analysis of the specimens had been made, for which there has till now been no opportunity.

One of the characteristics of this olivine rock is that it presents, in general, an unusually fresh appearance. One would expect that a rock like this, composed of a silicate which is generally found very much altered, would present some traces of considerable change, and the more so when we consider how completely it is exposed to the most powerful agencies of decomposition. Besides the force of the waves dashing against these islands, to which Sir Wyville Thomson drew particular attention, the influence of atmospheric agencies, at this particular point, must, owing to great and rapid variations of temperature, be exceptionally great.<sup>1</sup> Most of the specimens show no signs of decomposition, except along the crevices. Fragments broken off from hand-specimens are fresh and compact, and resemble a fine-grained quartzite from the older formations; but this resemblance cannot stand the test of investigation.

To the naked eye the massive unaltered rock appears perfectly homogeneous: it is very compact, and differs from all the olivine rocks with which I have compared it, by the minuteness of its grain.<sup>2</sup> Its colour is a blackish-grey, bordering on green, which, when deep, looks perfectly black. The specimens are sometimes covered with a coating of the whitish material already referred to. The naked eye and the pocket lens fail to detect any porphyritic elements, though we occasionally find in them a few small black irregularly-formed particles having a brilliant metallic lustre, and seldom exceeding 0.5 mm. in any direction. These minute particles are readily seen on fresh fractures, or on polished surfaces. By their peculiar brilliancy they resemble magnetite, but, as will be shown further on, they must be classed as chromic iron. Splinters from the rock are translucent on the edges, and of a greenish tint. On the fresher surfaces the lustre varies from sub-vitreous to resinous; the splinters redden in the flame of the blow-pipe, and are infusible. The rock is partly soluble in hydrochloric acid, as may

<sup>1</sup> We must observe, however, that the alterability of peridotite rocks is not perhaps quite so easy as has been often represented. When these rocks are very compact and as massive as those of St. Paul, for instance, they yield but little to decomposition. But the fissures which furrow that rock, and divide it into blocks, more or less regular, must have allowed the waves to work their disintegrating effect upon them, and have considerably reduced the primitive size of the rock-mass.

<sup>2</sup> The rock which most resembles the one I am describing is the peridotite of Ultenthal, in Tyrol; but the specimens I have seen have a much coarser grain than the peridotite of St. Paul.

be seen by the analyses: in hardness it is inferior to felspar, and shows a greyish or greenish-grey streak. The fracture is commonly even. The fragments are often angular, and have sharp edges; when of larger size they frequently show irregular forms.

The analysis which Professor Brazier made of a hard and compact specimen, very slightly altered, and yielding by trituration a greenish powder, gave the following result:—

## I. (B).

Soluble in HCl = 73.53	{ Loss by heat,	.	.	.	.	0.50
	{ Oxide of iron,	.	.	.	.	traces
	{ Protoxide of iron,	.	.	.	.	9.56
	{ Sulphate of lime,	.	.	.	.	0.29
	{ Magnesia,	.	.	.	.	31.43
Insoluble in HCl = 25.97	{ Silica,	.	.	.	.	32.25
	{ Alumina,	.	.	.	.	0.90
	{ Oxide of iron,	.	.	.	.	3.40
	{ Lime,	.	.	.	.	1.51
	{ Magnesia,	.	.	.	.	5.26
	{ Silica,	.	.	.	.	14.90
						<hr/> 100.00

We give here the result of another analysis by Dr. Sipőcz:—

The specific weight of the rock at 20.4° C. is 3.287.

*Firstly*, 1.0586 gramme of substance, fused with carbonate of soda and potash, gave 0.0113 gramme of water ( $H_2O$ ).

*Secondly*, 1.0853 gramme of substance, fused with carbonates of soda and potash, gave 0.4758 gramme of silica ( $SiO_2$ ), 0.1061 gramme of oxide of iron ( $Fe_2O_3$ ), 0.0124 gramme of alumina ( $Al_2O_3$ ), 0.0046 of oxide of chrome ( $Cr_2O_3$ ), 0.0014 gramme of manganese peroxide ( $Mn_3O_4$ ), 0.0056 gramme of protoxide of nickel ( $NiO$ ), 0.8186 gramme of lime ( $CaO$ ), and 1.3353 gramme of  $P_2O_7Mg_2$ , equal to 0.4801 of magnesia ( $MgO$ ).

*Thirdly*, 0.7140 gramme of substance, treated with fluorhydric and sulphuric acid for the determination of the ferrous oxide ( $FeO$ ), required 10.7 c.c. of permanganate of potash (1 c.c. of permanganate corresponding to 0.004547 gramme of iron ( $Fe$ ), or to 0.085846 gramme of protoxide of iron ( $FeO$ ), which corresponds to 0.1038 gramme of protoxide of iron ( $FeO$ ).

*Fourthly*, 1.0024 gramme of substance was treated with concentrated chlorhydric acid, the silica ( $SiO_2$ ) being then removed by carbonate of soda ( $Na_2CO_3$ ), the residuum obtained was 0.2830 gramme, equal to 28.30 per cent. of the peridotite rock left unattacked.

## II.

Silica ( $\text{SiO}_2$ ), . . . . .	43.84
Alumina ( $\text{Al}_2\text{O}_3$ ), . . . . .	1.14
Oxide of chrome ( $\text{Cr}_2\text{O}_3$ ), . . . . .	0.42
Protoxide of iron ( $\text{FeO}$ ), . . . . .	8.76
Protoxide of manganese ( $\text{MnO}$ ), . . . . .	0.12
Protoxide of nickel ( $\text{NiO}$ ), . . . . .	0.51
Lime ( $\text{CaO}$ ), . . . . .	1.71
Magnesia ( $\text{MgO}$ ), . . . . .	44.33
Water ( $\text{H}_2\text{O}$ ), . . . . .	1.06
	<hr/>
	101.89

Calculating the analysis of Dr. Sipőcz, we find that this rock contains 75 per cent. of olivine and 25 per cent. of enstatite, which closely answers to the results obtained by the microscopic examination. Thin sections, prepared from slightly decomposed specimens, show that the rock is composed of a mass, often consisting almost exclusively of minute grains of colourless, transparent olivine, irregular in form, and frequently not exceeding 0.1 mm. in diameter; that it contains, moreover, enstatite, actinolite, and chromic iron.

In all the slides which I have examined the grains of olivine essentially constitute what may be called the ground-mass of the rock (see figs. 1, 2, and 3). They generally give it, along with other elements, a microgranitoid structure. It is but very seldom that the granules of peridot assume dimensions large enough to produce a microporphyritic structure (fig. 2). Small sections of a light green colour scattered through the ground-mass, and other transparent isotropic sections of a brownish-yellow, were found in the slides.

In the microscopical preparations, where the microporphyritic structure is observed, the mineral particles which determine that structure are elliptical or irregular, but never have crystallographic contours. This microporphyritic structure, however, almost always passes into the banded structure, which is very decided when certain minerals, interposed between the bands, assume dimensions somewhat larger than the grains of the surrounding mass. In some preparations this banded structure cannot be accurately observed, especially in ordinary light, but other specimens possess it in a marked degree. The explanation of this feature will serve also to throw light on some of the anomalies presented by the larger crystals. When specimens with this banded structure are examined under low magnifying powers, they show transverse bands generally exceeding 0.1 mm. in breadth (fig. 2). They are, for the most part, undulated, dark, and alternate with more transparent zones. These transparent zones and dark stripes have essentially the same mineralogical constitution, the difference being due, as shown by a high magnifying power, to the fact that the dark bands consist of a compact mass of minute olivine grains mingled with a considerable quantity of chromic iron.

The bands, as a rule, preserve their parallelism, so that whenever there is a change of

direction, the deviation is the same for the whole breadth of the band. Examples of this arrangement are seen wherever large sections of crystals lie in the path of the band, for then the latter divides into two smaller ones, which seem to flow round the obstructing crystal, and reunite on the opposite side, when the band resumes the direction and size it had before. This feature gives rise to a sort of lenticular arrangement, which greatly resembles the so-called gneissic structure peculiar to some schists.

The sections of the constituent minerals are placed with their principal axes running in the direction of the bands, that is, parallel with them. This feature is readily perceived when they reach 1 or 2 millimetres in size. They are rounded or elliptical, sometimes terminated by vague crystallographic outlines, which occasionally disappear altogether, and the mineral then gradually melts away into the ground-mass and cannot be distinguished from it. Professor Bonney<sup>1</sup> has observed the same structure more particularly in the serpentine rocks of the Lizard. This banded structure may be produced by various causes, and I shall have to say something more about it on a subsequent page.

The microscopic slices are crossed in every direction by numerous joints or cracks, which seem to extend in straight lines, and intersect one another at more or less constant angles, sometimes dividing the slide into rhomboidal sections.<sup>2</sup> These joints seldom exceed 0.1 mm. in breadth, are filled with a greenish-yellow substance, and sometimes look like black streaks (figs. 1, 2, 3). This jointed or fissured structure would appear to be characteristic of rocks of this type. A great many of the slices examined under the microscope are covered with a perfect network of extremely delicate fissure lines, intersecting each other in every possible direction, with minute particles of a black opaque substance running along both sides of the joints. Whenever these joints, or crevices, are less perfectly marked, the ground-mass appears to lose its cementing power along their edges, and to become more granular. When the crevices widen they are commonly filled up with a yellowish serpentinous substance and black opaque grains.

I will now enter on the detailed description of the individual minerals that constitute the rock. A detailed microscopical examination of the specimens shows that the rock-mass is almost entirely composed of granular olivine, thus confirming the deductions drawn from chemical analyses and the microscopical examinations already described. Slides prepared from compact specimens, and examined with a power of 200 diameters, prove the ground-mass to consist of grains of olivine, with irregular, ill-defined outlines (fig. 1), sometimes slightly elongated, and sometimes blending so perfectly as to produce the appearance of a homogeneous substance (fig. 3). These grains, much more minute

<sup>1</sup> Bonney, On the Serpentine and associated Rocks of the Lizard District, p. 920.

<sup>2</sup> These regular joints, so similar to cleavage, may have caused Darwin to describe fragments of this rock as similar to blocks of altered felspar. The hand specimens also show these joints very distinctly when examined macroscopically.

than those in the dunite, are perfectly colourless and transparent, their surfaces presenting a certain rough appearance, which has long since been known to be one of the microscopic characteristics of this mineral. In polarised light the grains are clearly individualised, and the rock presents the phenomena of *aggregate polarisation*, each grain of olivine exhibiting the brilliant tints peculiar to thin sections of this mineral. Besides the olivine of the ground-mass there are also scattered grains of the same mineral, whose diameters sometimes reach 0.5 mm., thus giving the rock a microporphyritic structure, as already mentioned. These larger grains are mostly rounded or ellipsoidal; I have never observed any whose contours recalled the crystalline form of olivine. They are colourless and somewhat rough on their surfaces. In polarised light they assume very brilliant tints; they contain what would seem to be liquid enclosures. They are frequently furrowed by cracks or joints, and in some cases lines, distinctly parallel, corresponding to the brachydiagonal cleavage, are distinguishable; but these cleavage lines are never either so distinct or so numerous as the fibres in the sections of enstatite, which will be described later on. These lines are occasionally crossed by others, perpendicular to them and parallel to one another. These must correspond to the macrodiagonal cleavage, but the latter cleavage is not so distinctly marked as the former. It occasionally happens, however, that no cleavage is observed in the section. When the lines of cleavage are sufficiently marked, and when the extinctions with polarised light are sought for, the more or less elongated sections are found to possess the optical properties of crystals belonging to the prismatic system; these sections are extinguished parallel and perpendicular to the direction of the cleavages. The large and somewhat elliptical sections of olivine are occasionally formed by the agglomeration of a number of grains, and when examined in polarised light present a very brilliant mosaic. They are most frequently met with when the ground-mass consists of very minute grains, and assumes the banded structure.

After the olivine the most frequent ingredient is chromite. The grains of this mineral are seen to glitter on fresh or polished surfaces when the specimens are examined macroscopically. They do not exceed 0.5 mm. in any direction, generally vary from 0.1 mm. to 0.05 mm., and are mostly opaque, save where sufficiently thinned by polishing. In the latter case they are transparent, yellow, or chestnut-brown, rarely of a faint green; thus bearing no small resemblance to certain lamellæ of biotite (figs. 1 and 3). On a cursory examination these transparent sections would probably be classed as hornblende or biotite. When examined more closely the resemblance is found to be merely apparent, for there are no traces of cleavage or of lamellar structure. Dichroism is entirely absent, and all the transparent sections of any size remain persistently dark during a complete rotation between crossed Nicols. This last feature shows that they belong to some mineral of the cubic system. The irregular outlines of these sections, however, might at first sight make it doubtful whether they could be referred

to the cubic system; for, instead of resembling crystallographic forms of this system, they appear elongated and fusiform, sometimes presenting the appearance of a line tapering at both extremities, and with their greater axis always parallel to the direction of the band structure. This elongation and disposition of the particles of chromite is very similar to the arrangement of the magnetite particles in the Cambrian slates of the French Ardennes, so strikingly exhibited in the magnetic schists of Deville. This elongation of form, though so inconsistent with the crystalline system to which I refer them, is, however, an anomaly so frequently met with in minerals of the cubic system, that it offers very little difficulty: cuprite, among others, affords very remarkable examples of this inconsistency.

In the larger sections of chromite we observe fissures whose direction seems to correspond with that of the cubic cleavage, but they are mere breaks in the ground-mass, into which they may be traced. These same sections are also observed to contain enclosures, probably of magnetic iron, which cause the grains of chromite to be attracted by the magnet. If a fragment of the rock be pounded, and the grains extracted by the magnet be examined with the microscope, it will be seen that they often consist of an opaque nucleus, generally surrounded by a transparent zone of chestnut-brown, very similar to the transparent sections of chromite.

The question now is, whether this mineral is chromite, or whether it should be regarded as picotite, a mineral to which are generally referred the black grains found in constant association with olivine? We must here remark respecting these two mineral species that they present great analogies in their microscopical characters, and that the relations between their physical properties perfectly illustrate the transitions of their chemical composition. Indeed, it is well known that the chemical composition of the picotite found in the lherzolites and other olivine rocks, as well as in serpentines, approaches very closely to that of chromic iron. The picotite found in dunite, and which Petersen calls chrompicotite, contains 56 per cent., and even more, of oxide of chrome, with only 12 per cent. of alumina, 14 per cent. of magnesia, and 18 per cent. of protoxide of iron. These same proportions are found in most chromites; that of Freudenbach, for instance, analysed by K. von Hauer, gave him 49 to 52 per cent. of oxide of chrome, 10 to 12 per cent. of alumina, 18 to 21 per cent. of magnesia, and 4 to 6 per cent. of silica. It will thus be seen that the difference between picotite, chrompicotite, and chromite is not very considerable; they have all the same chemical formula, crystallise in the same system, and, as I shall point out presently, the microscopical characters of sections described as picotite are exactly similar to those of chromite. One may therefore be allowed to ask by what microscopic characteristics these two mineral species are to be distinguished. It has hitherto been admitted, on the one hand, that sections of picotite become transparent when very thin; and on the other hand, that those of chromite in every case remain opaque. This distinction is due to Fischer, who, in his microscopical study of the

chromite of Cassin, Département du Var, and of Baumgarten, found no transparent sections of this mineral.<sup>1</sup> In a later note,<sup>2</sup> however, returning to the same subject, he says that minute grains of chromite, examined with a power of 1080 diameters, are translucent and even transparent, possess a reddish colour, and are sometimes even decidedly red. Since the publication of Fischer's second note, Dathe<sup>3</sup> has shown that the transparency of chromite depends neither on the minuteness of its sections, nor on the high powers with which it is examined. According to him, fragments of chromite from Baltimore, reduced to a coarse powder, and examined with a power of 90, and even 20, diameters, were plainly seen to be both transparent and isotropic. I have compared the sections observed in the slides made from the Rocks of St. Paul, and determined as chromite, with grains of chromite taken from a specimen from Kisnikoff, in the Oural Mountains. These grains, examined with a power of 90 diameters, show the same characteristics and are perfectly identical with the yellowish-brown isotropic grains of the olivine rock under description. I have found that the chromite sections are transparent only when under 0.1 mm. in thickness. Triturated chromite seen under the microscope very much resembles brown obsidian in its physical properties.

After what has been advanced in the foregoing comparative analysis, I see no reason for separating picotite and chromite on microscopical grounds. An examination of a slide prepared from a specimen of dunite, which Professor Maskelyne had the kindness to forward to me, enables me to state that the chrompicotite of that rock has essentially the same characteristics as the chromite of St. Paul. The only difference I could establish is that in the dunite the granules of the picotite show outlines of greater regularity than those of the chromite in the olivine rock. As for the presence of chrome, it is easily proved by pyrognostic reactions, and Dr Sípöcz has determined its percentage in the analysis quoted above.

Among the minerals playing a secondary part in the composition of the Rocks of St. Paul, either because rarely present, or because constant only in some varieties, we may name two, one of which can be referred to hornblende, the other to a rhombic pyroxene. The sections of the amphibolic substance appear sometimes pale green (fig. 3), sometimes colourless; their contour is ill-defined, and seems to shade into the ground-mass, from which, when in thin slices, they are indistinguishable, even by colour. Though its colour may be less intense in some cases than in others, this mineral is easily recognised in polarised light, because, when in larger and more homogeneous sections, it stands out from the mass of granular olivine.

Some of these sections perpendicular to the vertical axis are marked by a net-

<sup>1</sup> Zirkel, *Mikroskopische Beschaffenheit*, &c., p. 246; Rosenbusch, *Mikroskopische Physiographie der Mineralien*, &c., vol. i. pp. 159, 160.

<sup>2</sup> Fischer, *Kritische mikrosk. mineralogische Studien* ii., Fortsetzung, 1873, p. 44.

<sup>3</sup> Dathe, *Olivinfels, Serpentine, und Eklogite des sächsischen Granulitgebietes*, Neues Jahrbuch, &c., 1876, p. 247.

work of lines which intersect one another at an angle of about  $124^{\circ} 30'$ . This cleavage is well marked, and forms a very important element in determining the nature of the substance. Other sections are elongated, and form long parallel lamellæ; but their prismatic cleavage is not always distinctly marked, although with higher powers the lamellæ can be detected. Some of these sections are extinguished parallel and perpendicular to the lateral edges, others are extinguished at an angle of about  $15^{\circ}$ . This mineral is therefore clinorhombic, and belongs by its angle of cleavage and optic properties to an amphibolic mineral. The fibrous structure and colour which the sections sometimes assume, would afford some ground for classing it as uraltite; but I have nowhere found even the slightest indication of its having been derived from augite. If it be uraltite the paramorphosis is complete in all the specimens submitted to me for examination. Another circumstance which makes it difficult to form an opinion is that the contours are vague and so ill-defined that it is impossible to discover forms resembling pyroxene, or in any way recalling its presence. The sections are dichroitic, but very feebly so, owing to lightness of colour. The presence of hornblende in an olivine rock is not an isolated fact; such an occurrence was noticed by Tschermak in the eclogites accompanying the granulites of Lower Austria. He considered the amphibole as smaragdite. He also found hornblende in the olivine rocks of Greenland; the specimen from Simmetak, in the Museum of Vienna, is an aggregate of olivine, hornblende, bronzite, and biotite. If the occurrence of this amphibolic mineral in the olivine rock of St. Paul were more constant, it might be compared to that of Varollo, in which Stelzner found olivine, bronzite, and hornblende.<sup>1</sup> I am disposed to refer it to actinolite, of which it seems to possess the most characteristic properties.<sup>2</sup> In some of its sections it is not so well characterised, having lost all trace of cleavage, and looking like a chloritic decomposition product. Even then, however, the optic properties remain the same in the altered as in the fresh and normal sections, and in the most thoroughly decomposed, characteristic enclosures in the direction of the principal axis are always found.

I consider these enclosures to be colourless transparent microliths, in form generally prismatic, their greater axis being always parallel to the vertical axis of the enclosing mineral. They are frequently black and opaque, at least in some parts of their length, and some of them look like hollow cylinders whose inner walls are covered with black grains. It is very difficult to pronounce upon their nature. Were they merely microscopical pores or gas enclosures with linear arrangement, I would compare them to the enclosures noticed by Dathe<sup>3</sup> in the enstatites of the olivine rocks of Saxony, and by

<sup>1</sup> Stelzner, Zeitschrift d. d. geol. Gesellschaft, 1876, p. 623.

<sup>2</sup> Some preparations of the rocks of Greece, described by Becke under the name of *Serpentin Olivin-Gesteine*, have shown me the same amphibolic mineral, which that author refers to actinolite, as I do myself. (Becke, Gesteine von Griechenland, Tschermak, Min. Mitth., 1878 and 1879.)

<sup>3</sup> Dathe, Neues Jahrbuch, &c., loc. cit., p. 225.

Wiegand<sup>1</sup> in the bronzite of Starkenbach. They seldom exceed 0·008 mm. in breadth, and may reach 0·04 mm. in length. The presence of nearly similar enclosures, having the same arrangement, has already been observed by Zirkel,<sup>2</sup> in the hornblende of some syenites and diorites. I find that actinolite is most abundant in those slides wherein the ground-mass is fine-grained, and poor in large sections of olivine.

The large ellipsoidal sections mentioned before as more abundant in the slides with band structure, and to whose presence the undulations in the bands are due, should for the most part be classed as enstatite.<sup>3</sup> They never present a regular crystallographic outline. They are colourless, or of a slightly greenish-yellow tint; and are lamello-fibrous in structure, the fibres being about 0·02 mm. thick, and extending from side to side so as to preserve their parallelism throughout the section. They are distinguished from hypersthene by the absence in them of these enclosures which have come to be considered as distinctive of the latter mineral,<sup>4</sup> and by the absence of strong dichroism. Their lamellar structure is easily seen in ordinary light; but in polarised light it becomes very conspicuous, and shows that the crystals are not simple, but polysynthetic. These bear a marked resemblance to sections of triclinic felspar. If the lamellæ are placed parallel to the spider lines of the microscope, a series of alternate lamellæ is extinguished, whilst other alternating lamellæ, less numerous but broader, are often extinguished at an angle of about 40°. Hence these polysynthetic crystals are composed of lamellæ of a rhombic pyroxene, between which are intercalated other lamellæ of a clinorhombic pyroxene. The twin face of the two minerals is the macropinacoid of the enstatite, or the orthopinacoid of the clinorhombic pyroxene. The lamellæ of the augitic mineral are generally thinner; but, apart from this difference, the two kinds cannot be distinguished in ordinary light: they are of the same colour, and possess the same intensity of dichroism. Association of diallage with a rhombic pyroxene, similar to that just described, has been observed in the rocks of Volpersdorf, Hausdorf, and Elfdalen.<sup>5</sup>

<sup>1</sup> O. Wiegand, *Tehermak, Min. Mitth.*, 1875, iii. p. 193.

<sup>2</sup> Zirkel, *Mikroskopische Beschaff.*, &c., p. 401. Rosenbusch (*Massige Gesteine*, p. 261) has made the same observations regarding some diorites where the hornblende is present in large crystals. He observed that brown transparent grains, or minute prisms, disposed like those above described, were often embedded in the hornblende crystals. He observed others arranged in lines parallel to the base of the crystal. He does not believe their formation to have been contemporaneous with that of the enclosing crystals, but thinks the grains and prisms are due to some subsequent changes. He accepted this interpretation the more readily because the hornblende containing enclosures was more fibrous and brighter in colour than that without them.

<sup>3</sup> I do not attach a specific value to the term enstatite used in this passage. Bronzite and enstatite show more difference macroscopically than they do in thin slices where a crystal of bronzite may become colourless, owing to the thickness having been reduced by polishing.

<sup>4</sup> Perhaps less importance will be attached henceforth to the presence of these enclosures for the purpose of determining hypersthene and diallage. Kosman maintained that these enclosures were of secondary formation (*Neues Jahrbuch*, &c., 1869, p. 533). Trippke, in a recent paper (*Neues Jahrbuch*, 1878, p. 676), takes up the same view. He considers them to be formed of *ojal*. Should this interpretation prove correct, the microscopical diagnosis of augite and diallage will become more and more difficult.

<sup>5</sup> Rosenbusch, *Massige Gesteine*, p. 463.

The enstatite of Harzburg and the hypersthene of the norites<sup>1</sup> present the same polysynthetic structure when examined with crossed Nicols. Mr. Trippke<sup>2</sup> has lately discovered similar polysynthetic associations of diallage and enstatite in the olivine rock of Gröditzberg. A section of a crystal of enstatite from the latter locality, cut following the brachypinacoid, shows parallel lamellæ, some of which are extinguished between crossed Nicols when their principal axis is parallel to the threads of the reticle, while the others are extinguished at an angle of about 38°. Sections cut parallel to the macropinacoid give extinctions parallel and perpendicular to the vertical axis. From what I have been able to observe, the serpentinous peridotite rocks of Eubæ, described by F. Becke, present polysynthetic associations similar to those here described.

In the slides containing sections of enstatite I have also found rather large grains of olivine, similar to those described above. They are elliptical in form, like the pyroxenic mineral, from which, however, they differ in being entirely devoid of traces of lamellar structure. They contain, moreover, numerous enclosures, apparently liquid, occurring sometimes in lines, and sometimes scattered irregularly through the sections. I have never noticed any such enclosures in the enstatite of the rock under description.

After having described the general distinctive characters of the constituent minerals of the rock, I propose to examine in detail certain features of the olivine, and more especially the enstatite sections deserving of attention. We shall thus arrive at the question of the origin of the rock, as far as this problem can be elucidated, solely from the standpoint of microstructure. We have to ascertain whether certain deformations shown by sections of olivine and enstatite should be interpreted as having been produced by the action of a moving igneous magma (*fluxion-structure*), or should be considered more or less abnormal forms assumed by these sections, to which analogies may be found among the crystalline schists. If the explanation of fluxion-structure could be adopted, it would undoubtedly furnish the strongest argument for the igneous origin of the Rocks of St. Paul. So obvious, indeed, is the resemblance between the structure about to be described and that of true fluxion-structure, that at first sight they may readily be regarded as identical. In certain preparations of the Rocks of St. Paul, especially in those with more or less banded structure, the large sections of olivine and enstatite are disposed on a line with their vertical axis according to the direction of the bands. It looks as if this disposition had been brought about by the motion of a mass in fusion, in which crystals of large dimensions were floated away by the flow of the magma. What tends to confirm this interpretation of the facts is, that on the edge of the sections of these crystals something like traces of fusion may be observed, the olivine and enstatite seeming to dissolve insensibly into the surrounding mass. Still more worthy of attention are the modifications of the section represented in fig. 2. Besides its fracture and the displacement of its fragments in the direction of the bands, the crystal, as I have

<sup>1</sup> Rosenbusch, *Massige Gesteine*, p. 478.

<sup>2</sup> Trippke, *Neues Jahrbuch*, &c., 1878, p. 673.

endeavoured to show in the figure, has undergone a remarkable process of folding, or curling back upon itself. This crystal seems to have been partially softened, and to have lain with its principal axis at right angles to the bands. It looks as if a current had drawn along and bent into the shape of a U the fine lamellæ of which the crystal is composed, while allowing them to preserve their parallelism. The lamellæ are fractured at the summit of the arch of curve; the edges of the fracture correspond exactly, and the space between them is filled up with the ground-mass of the rock. The bands of this ground-mass undulate around the broken crystal. The somewhat rounded fragment of enstatite shown on the left hand side of fig. 2, near the top, in which the striæ appear to correspond with those of the folded crystal is, I think, a fragment of the latter.<sup>1</sup>

But sections presenting the same appearance may be found abundantly in the family of the schists, to which, as the considerations adduced at the end of this report will show, some of the peridotites should be referred. Among the analogies of microscopic structure between true schists and the Rocks of St. Paul may be enumerated the ellipsoidal form of the crystals, to which we have drawn attention, their entwinement by the bands in the fundamental mass, the disruption of the larger individuals, as well as their curvature and folding. The ill-defined ellipsoidal form of the olivine and enstatite of St. Paul's rock, together with the ribbon structure, remind one forcibly of the folia of phyllitous substances among the schist, with their ellipsoidal sections of quartz or of felspar, sometimes rounded, sometimes in lines, and frequently ruptured. That gneissic structure recalls the disposition of the undulated lines of the obsidians. Moreover, the schists frequently show curved and folded crystals welded together by the encircling mass, as, for example, the tourmaline of certain chloritic-schists, and the felspars of the porphyroids, whose characters no one would now explain by the fluxion-structure.

Undue stress should not be laid on the absence of a vitreous base as a proof that the St. Paul's rock is not eruptive. I am well aware that the presence of amorphous and isotropic matter is not an infallible indication of the igneous origin of a rock; for such matter has been detected even in schists. We therefore arrive at the conclusion that the recognition of this special structure is not in itself sufficient to decide the question of origin, which must be determined from a wider basis of evidence, as will be more fully stated in a later part of this report.<sup>2</sup>

<sup>1</sup> It may be remarked, however, that macroscopic crystals of bronzite are often bent and folded. They affect that disposition naturally. In the preparations of the peridotite rocks of Greece described by Becke, and which I have had occasion to examine, I have observed deformations analogous to those noted here. Becke says they are produced by mechanical action.

<sup>2</sup> At the time when I was studying this rock, I communicated the preliminary results, by letter, to Professor Rosenbluth, and it was published by him in the *Neues Jahrbuch für Min.*, 1879. In that preliminary communication I expressed a much more decided opinion upon the existence of true fluxion-structure, and the most eminent lithologists to whom I had shown the preparation (fig. 2) did not hesitate in declaring that this interpretation was well founded. If I now express myself with more reserve, it is because recent researches tend more and more to establish the fact that in many cases peridotites are rocks imbedded in the schisto-crystalline series with which they must have a common origin.

Some of the specimens, as already mentioned, have an exceedingly fresh and unaltered appearance ; many, on the contrary, are deeply altered. I will now describe these products of decomposition, and the fragments covered or impregnated with phosphate of lime.

The specimens showing the fewest traces of alteration are greenish-grey in colour, with a vitreous lustre ; thin sections prepared from them show the ground-mass to be perfectly granular. Along the capillary fissures cohesion diminishes, and a blackish secondary product is deposited between the granules or the more coherent portions. This may be called the first stage of alteration ; the more advanced stages are marked by a widening of the fissures, and by the presence of a transparent, fibrous, greenish, or slightly yellow serpentinous substance, partly isotropic, with irregular black grains that must be classed as magnetite. It is unnecessary to describe here the alteration of olivine into serpentine, which has already been done so thoroughly by many microscopists. We may pass on to the description of the specimens which have undergone most alteration. In these the ground-mass, instead of being compact, with deep lustrous tints, is almost brittle, of a greenish-yellow hue, and crossed in all directions by black opaque and slightly lustrous veins. These specimens have the characteristics of serpentine. In the less altered specimens, black veins run along the regular fissure-lines already described. All these marks show serpentinous alteration-products. The sections resemble breccias, and have their joints completely impregnated with phosphate of lime. A specimen is occasionally found containing fragments of unaltered olivine ; but, as a rule, most of the specimens are changed into a greenish-yellow serpentine with dark veins. In a more advanced stage of decomposition, the small dark veins stand out in relief, the surface of the serpentine being softer, disintegrates and falls away, thereby giving the surface of the rock a honeycombed look. The projecting veins are not infrequently covered with a deposit of mamillated phosphate of lime ; concretions of the same substance fill the small honeycomb-cells, and all the joints are covered with a light coating of it.

To this circumstance these altered portions of the rock owe their peculiar stalactitic appearance in which they so resemble certain varieties of ores of zinc, or some phosphorites. Some of the specimens are composed of fragments of serpentine cemented together by veins of phosphate of lime 5 to 6 millimetres broad. These veins are compact, and to the naked eye, or, better still, under the pocket-lens, they show an indistinct concretionary structure, the more or less circular forms of which present yellowish or rosy-white zonal bands, like some of the ribboned agates. Between concretions are often found cavities that give the whole mass an appearance not unlike that of the cherts of the Carboniferous limestone, in which the cavities are formed by the disappearance of calcareous fossils. The compactness of grain and the other macroscopic characters might, at first sight, readily cause the concretions to be taken for fragments of chert.<sup>1</sup> Their decomposition results in a fine pinkish-white powder.

<sup>1</sup> Darwin is probably speaking of this phosphate when he remarks : " In some parts the rock is of a cherty nature " (*loc. cit.*, p. 8).

This phosphate is dull, and slightly resinous on fresh surfaces, with a sub-conchoidal fracture, and a hardness exceeding that of fluorite. It is opaque in thin splinters, but the edges are slightly translucent: small fragments heated in the test-tube decrepitate loudly. The latter characteristics taken together with those already mentioned points to a close connection between this substance and that erroneously described as pyroclase by Shepard.<sup>1</sup> The particles of the phosphate of St. Paul that remained in the test-tube blackened, and set free a small quantity of water. Splinters large enough to be held with the forceps in the flame of a blow-pipe turn white, the edges fuse with difficulty to a white enamel, and colour the flame a pale yellow. When treated with borax it yields a colourless glass. I have not been able to discover traces of fluorine in it.

Thin sections of this phosphate present almost all the microscopical characters described as belonging to the concretionary silica of the Carboniferous limestone cherts,<sup>2</sup> except, perhaps, that the phosphates never exhibit the brilliant chromatic polarisation peculiar to the quartz of the chert. The agate-like structure is very marked. The concretions, more or less circular in form, either stand side by side or run into one another. Their outer edges have zones of deep brown or yellow, while at the centre they are generally colourless. When they merely touch one another at tangential points, intervals filled with a dark opaque substance occur (see fig. 4). Some of these concretions are fibro-radial, and in polarised light show the black cross like chalcedony. The concentric zones are made up of lines of extreme delicacy, only distinguishable under very high magnifying powers. The outer zones contain no enclosures of foreign matter, but accumulations of greyish intertwined filaments are noticeable towards the centre. Seen with a high power, these fibres assume a branching dendritic disposition that strikingly resembles vegetable structure. They resist the action of hydrochloric acid much longer than the surrounding mass. Reflected light sometimes shows in the central parts of the concretions small sections of a steel grey colour, bearing a strong resemblance to enclosures of carbonate of lime. Large black or yellowish-brown undulating lines which cross the slides and separate the concretions owe their colour to the presence of hydroxyde of manganese and iron.

Many of the specimens showing alteration, or impregnated with the phosphate just

<sup>1</sup> He used the word pyroclase to indicate the manner in which the mineral acted when subjected to heat. To the phosphorite we are describing should be referred the substances to which Shepard has given the general name of pyro-guanite (*American Journal of Science and Arts*, II. ii., 1856, p. 96). The minerals thus grouped together were pyroclase, glauapatite, and epiglaubite. According to Shepard, these three varieties are found at Monk's Island, in the Caribbean Sea, where they cover the soil to the depth of many inches. They are hard and stony, and on the parts exposed to the action of the atmosphere are cream coloured, while the interior is of a yellowish-brown. Shepard admits the disappearance of the ammonia, and strives to explain it by contact with trap rocks, whose heat might have fused the phosphate. I will return to this theory later on. According to Dana (*System of Mineralogy*, p. 535), what Shepard calls pyroclase is only compact guano.

<sup>2</sup> A. Renard, *Recherches lithologiques sur les Phthanites du calc. carb. de Belgique*, Bull. Ac. Roy. de Belgique, 2<sup>ème</sup> Série, t. xlvii., Nos. 9 and 10, 1878.

described, have been subjected to chemical analysis. I will give a brief account of the results, with a few succinct remarks drawn from the lithological examination of each. The specimen whose composition is represented by the following analysis, No. 3, is made up of peridotite, more or less altered to serpentine. The ground-mass is cut up by little veins, or septa, of a blackish substance much harder than the surrounding body. Hence the septa stand partly out in relief, and the phosphate has collected around them in concretions. The fragment analysed must have been taken from a part of the rock showing fewest signs of alteration.

## III. (B).

	Loss by heat at 230° Fahr.,	.	.	4.20
Part soluble in HCl = 85.00	Alumina,	.	.	0.38
	Oxide of iron,	.	.	traces
	Phosphate of lime,	.	.	0.28
	Protoxide of iron,	.	.	8.01
	Sulphate of lime,	.	.	0.96
	Carbonate of lime,	.	.	0.47
	Magnesia,	.	.	38.20
Part insoluble in HCl = 10.80	Silica,	.	.	36.70
	Alumina,	.	.	strong traces
	Oxide of iron,	.	.	1.92
	Magnesia,	.	.	0.28
	Silica,	.	.	6.80
				<hr/>
				100.00

The fourth analysis is that of a breccia formed in a fissure of the olivine rock. It consists of fragments of olivine rock, 2 to 3 cm. long, and of the debris of highly altered decomposed bones, whose organic structure is almost entirely obliterated. We notice in these specimens fragments that look like rounded pebbles. The predominant feature of these brecciform rocks is that of pseudo-fragments, *i.e.*, fragments formed *in situ* in the fissures of the rock, which, widening by decomposition, became filled with serpentinous matter and phosphate of calcium. The phosphatic material readily disintegrates and yields a whitish impalpable powder. It was the more or less impure phosphate that gave the following analysis:—

## IV. (B).

Loss by heat at 230° Fahr.,	.	.	.	.	.	4.40
Oxide of iron,	.	.	.	.	.	1.42
Phosphate of lime,	.	.	.	.	.	82.65
Protoxide of iron,	.	.	.	.	.	traces
Oxide of manganese,	.	.	.	.	.	„
Sulphate of lime,	.	.	.	.	.	4.76
Carbonate of lime,	.	.	.	.	.	4.86
Carbonate of magnesia,	.	.	.	.	.	1.41
Residue,	.	.	.	.	.	0.50
						<hr/>
						100.00

Analysis V. belongs to a breccia of very peculiar character, in which are distinguished fragments of shells and debris of the bones of vertebrates, enclosed in a compact greyish earthy mass.

## V. (B).

Loss by heat at 230° Fahr.,	.	.	.	.	.	.	4.90
Oxide of iron,	.	.	.	.	.	.	1.45
Phosphate of lime,	.	.	.	.	.	.	38.40
Protoxide of iron,	.	.	.	.	.	.	traces
Oxide of manganese,	.	.	.	.	.	.	0.50
Sulphate of lime,	.	.	.	.	.	.	2.90
Carbonate of lime,	.	.	.	.	.	.	33.38
Magnesia,	.	.	.	.	.	.	9.37
Silica,	.	.	.	.	.	.	7.70
Insoluble residue,	.	.	.	.	.	.	1.40
							<hr/> 100.00

This breccia is bordered on both sides by black bands, 7 or 8 millimeters thick, presenting all the mineralogical characters of manganese. Sir Wyville Thomson<sup>1</sup> describes a breccia similar to the one analysed above, "Each face of the crevice," he says, "is covered by a hard black coating about a quarter of an inch thick." Moseley also points out that MacCormick<sup>2</sup> had already drawn attention to this black coating of the rock-fissures. Sir Wyville Thomson says that the coating when triturated gives a dirty-looking greenish-grey powder, which effervesces in dilute hydrochloric acid, leaving a brown insoluble residue, and when treated with concentrated hydrochloric acid, it set the chlorine free, and coloured the acid in the same manner as protoxide of manganese. Moreover, Mr. Buchanan<sup>3</sup> found in these breccias with black incrustations, phosphate and carbonate of lime, carbonate of magnesia, traces of copper and of iron, while the crust itself yielded water in the test-tube.

Although there is nothing more common than to find coatings of manganese deposited by infiltration in the crevices of rocks of older formations, as well as in modern superficial deposits, yet before the Challenger expedition no one suspected the important part played by this mineral in deep-sea deposits. Without stopping here to discuss the formation of the nodules of manganese at the bottom of the sea, we may mention as a characteristic of this mineral that it forms concretionary deposits in the fissures of silicid rocks, of whose decomposition it is a result. I have been able to recognise traces of manganese in unaltered specimens of the olivine rocks of St. Paul.

Analysis VI. was made of a fragment of scoriaceous aspect, having somewhat

<sup>1</sup> Sir Wyville Thomson, *Voyage of the Challenger*, vol. ii. p. 106.

<sup>2</sup> Moseley, *Notes by a Naturalist on the Challenger*; MacCormick, *Voyage (Ross's) to the Antarctic and Southern Regions*, vol. i. pp. 14-18.

<sup>3</sup> Buchanan, *Proc. Roy. Soc.*, vol. xxiv., No. 170, 1876, p. 613.

the appearance of lava, but it was in reality nothing but a block of honeycombed mammillated phosphate. This specimen is covered over with limonite; the few sections of altered olivine rock coated with phosphate are so thoroughly decomposed that the finger-nail will scratch them.

## VI. (B).

Loss by ignition at 230° Fahr.,	.	.	.	.	.	5.23
Oxide of iron, .	.	.	.	.	.	8.47
Phosphate of lime, .	.	.	.	.	.	70.46
Oxide of manganese, .	.	.	.	.	.	traces
Sulphate of lime, .	.	.	.	.	.	4.88
Carbonate of lime, .	.	.	.	.	.	6.54
Magnesia, .	.	.	.	.	.	1.71
Silica, .	.	.	.	.	.	1.41
Insoluble residue, .	.	.	.	.	.	1.30
						<hr/> 100.00

We have now to consider the composition of the white enamel that gives the South Rock of the group of St. Paul the dazzling appearance described by Darwin. He attributed the white colour partly to the excrements of the sea-fowls that inhabit the rock, and partly to a hard and brilliant enamel with which its surface is covered. According to him, specimens examined with the lens show that they are composed of exceedingly thin layers, the entire thickness not exceeding the tenth of an inch. This substance, which contains a very large proportion of animal matter, appeared to him to be phosphate of lime. He mentions at the same time that he found in the Isle of Acension, and in the Abrolhoos, certain substances, ramified in form, that must evidently have been produced in the same fashion. He lays great stress on the resemblance between these ramified forms and nullipores.<sup>1</sup> Darwin has shown specimens of this incrustation to geologists, and all have admitted that it was due to some volcanic or igneous action. Without enumerating the detailed opinions that have been entertained with regard to this crust, or discussing the similarity of appearance and of physical and chemical properties existing between certain mineral substances and the harder parts of organisms, I may remark that Darwin and Mr. Buchanan<sup>2</sup> regard this white coating as due to the accumulation of excrement of sea fowl, the insoluble residue of which has been exposed during very long periods of time to the action of the sun's rays and of the waves of the ocean. Subsequently, concretions have been formed, and thus the entire exposure has become coated with this kind of enamel. I am led to adopt this explanation as the true one, and I consider it applicable, not only to the substance in question, which the chemical analysis shows, beyond a doubt, to be a tribasic phosphate of lime, but also to

<sup>1</sup> Darwin, Voyage of the "Beagle," chap. i. p. 8.

<sup>2</sup> Sir Wyville Thomson, Voyage of the Challenger, vol. ii. pp. 107, 108.

all concretionary phosphates found united with the olivine rock of St. Paul. Out of all the specimens forwarded to me for inspection there was but one small fragment, a few centimetres in size, which was coated with this substance. It had a lustrous glassy appearance, like most natural and artificial scoriæ; but it obviously cannot be supposed to have had an igneous origin.<sup>1</sup> Microscopical examination proves that it lacks the characters invariably presented by natural glasses or fused minerals.

I think it must be admitted that this concretionary substance was formed after the manner of mineral incrustations. In aspect it is very similar to hyalite and other varieties of colloidal silica, but it is neither so diaphanous, nor of such brilliant lustre as the former, neither has it the hardness of opal; then, again, its pyrognostic characters separate it totally from all silicious incrustations. Darwin's description of it is very accurate. He says that it is composed of very thin layers, spread out all over the surface of the rock, and studded over with spheroidal forms having a concentric arrangement that at once recalls the orbicular silicious concretions (*orbicules siliceux* of Brongniart). It is in perfect contact with the surface of the rock, conforming with its every irregularity, and clinging to it strongly. Barring its whitish tint, and bright lustrous appearance, I have been unable to perceive any difference between this enamel and the concretionary phosphate above described. The pyrognostic characters are the same as in the yellowish rosy mass constituting the phosphatic veins and the breccias; the structure is also the same in both cases, and the chemical analyses prove the matter under consideration to be phosphate of lime.<sup>2</sup>

I removed a very small portion of this incrustation, weighing about '0175 grammes, and subjected it to a quantitative analysis. The quantity analysed was so minute that the only certain results obtained gave phosphoric acid and lime, viz.,  $P_2O_5$ , 33.61 per cent.; and CaO, 50.51 per cent. Iron, magnesia, and sulphuric acid were also present. The composition is, therefore, essentially a tribasic calcic phosphate, with sulphate of lime, and perhaps also carbonate of lime, magnesia, and iron.

The lithological description of the Rocks of St. Paul being now terminated, there remains for inquiry the question whether as a whole the observations now obtained are

<sup>1</sup> Phipson (Journal Chem. Soc., xxv. p. 277; and Amer. Journal of Sc. and Arts, xxxvi. p. 423) gave the name of somberite to a phosphatic rock which must possess great analogy with the material I am describing. He considers it as composed of phosphate of lime, and phosphate of alumina. "It appears as an amorphous, gelatinous phosphate, that has been subjected to the action of a high temperature." Julien (Amer. Journal of Sc. and Arts, p. 242) has proved that Phipson's reasons for classing the somberite as a mineral are not well founded. He has shown that it is a modern limestone formed at the bottom of the sea, and containing some guano, which occasionally yields 75 to 90 per cent. of phosphate of lime, and from 3 to 4 per cent. of carbonate of lime.

<sup>2</sup> Piggot (Proc. Amer. Phil. Soc., Phila., vi. 189; Am. Journ. Science and Arts, 2nd series, 1856, No. 22) has described a stony substance found at Los Monges, at the entrance of the Gulf of Maracaybo, and at other points along the coast of the Carribbean Sea. At Los Monges it forms a very thin glossy layer over the deposits of common Mexican guano. In some places the layer is an inch thick, in others it does not exceed a few millimetres. The chemical analysis of this substance made by Higgin and Bickel shows that it consists of phosphate of lime and magnesia. I consider the deposits at Los Monges as quite similar in their mode of formation to those of St. Paul.

sufficient to enable us to arrive at a positive conclusion with regard to the mode of formation of the rock.

We shall first examine the question in its lithological bearing, which, indeed, in the present instance is the most certain basis to work upon, for in this case we have no other positive data than the lithological. Frankly admitting once more that lithological constitution alone cannot always decide the question of origin, we find that this dubiety increases in proportion to the number of new peridotite rocks discovered, for each fresh discovery seems to upset views previously entertained. It may be of service here to cast a rapid glance over the characters of the principal known peridotites, and on the received interpretations of the mode of formation of olivine considered as a mineral.<sup>1</sup> It may be admitted in a general manner that no objections can be raised *a priori* against the igneous origin, pure and simple, of a peridotite rock. Olivine unquestionably belongs to that class of magnesian silicates which can be crystallised artificially with the greatest facility by dry fusion, as shown by the products of smelting furnaces, and by the experiments of Daubrée.<sup>2</sup> The igneous origin of olivine is also proved by the presence of this mineral in the lavas of active volcanoes and in older rocks universally admitted to be pyrogenous. This fact is shown in a most conclusive manner by the basic volcanic glasses dredged by the Challenger in the Pacific Ocean; those glassy lapilli contain the most beautiful olivine crystals,<sup>3</sup> and might in some cases be classed as olivine rocks, since more than one-half of their whole mass is composed of crystals of olivine, which are so compact and numerous as to seem to be present in greater quantity than the vitreous ground mass.

Not only does olivine, considered as a mineral, appear in conditions where its igneous origin is unquestionable, but some peridotites if we are to judge from the investigations of competent observers, present positive characters of eruption. Hochstetter admits that dunite<sup>4</sup> should be considered as an eruptive rock. According to Bonney,

<sup>1</sup> We do not pretend to say that olivine is an essentially pyrogenous mineral, but that name may be given it in most cases, though it is occasionally found in crystalline limestone, in tale-schists, and in other rocks whose mode of formation is still open for discussion, and whose origin cannot be considered as purely and simply pyrogenous. In this respect, olivine is somewhat like amphibole and pyroxene. Though generally present in volcanic rocks, these minerals are nevertheless sometimes the constituent elements of rocks which cannot be considered as having an igneous origin.

<sup>2</sup> Daubrée, Comptes rendus, t. lxii.; Bull. Soc. Géol. de Fr., 2<sup>ème</sup> Série, t. xxiii., 1866; Rapport sur les progrès de la Géol. Expér., 1867, p. 122.

<sup>3</sup> These crystals are perfectly identical with those described by Penck (Studien über lockere vulkanische Auswürflinge, Zeitschrift d. d. geol. Gesell., 1878, p. 8); and by Van Werveke (Neues Jahrbuch für Mineralogie, &c., 1879, pp. 484, 485).

<sup>4</sup> The dunite here alluded to was discovered by F. Hochstetter in 1859 (Zeitschrift d. d. Geol., Ges., 1864, p. 342), near Nelson, New Zealand, where it constitutes a large mass in Dun Mountain, with cliffs 4000 feet high. It is intercalated in an immense vein of serpentine from one to two miles long. The dunite is composed exclusively of granular olivine, of a greenish-grey colour, possessing all the physical characters given in the foregoing descriptions of the specimens examined by me. Chromic iron is also present in the dunite, but much more developed than in the specimens from St. Paul. Prof. Hochstetter believes that the outflow of the dunite occurred during the mesozoic period. As no microscopic description of this rock has yet been published, I may here give the principal characters presented under the microscope. In the slide I have examined (which was kindly lent to me by Prof. Maskelyne) it appeared, in

serpentines derived from the decomposition of peridotites, such as are found in the Lizard district, are intrusive.<sup>1</sup> The same geologist, who has recently made a study of the lherzolites<sup>2</sup> of the Ariège states that these rocks must have been intruded through crystalline limestone. The observations of Zirkel on peridotitic rocks from Iceland deserve to be noticed here.<sup>3</sup> He points out that although the basalts and anamesites of Iceland are almost wanting in olivine; yet on the north coast of the island, near Melstadr, Hnaußer, and Hofssos, thick isolated layers of rocks, composed almost exclusively of olivine, are found intercalated in the lava; the amount of augite present in this rock being so small that the mass may be considered as formed entirely of olivine. Naumann<sup>4</sup> adds that the fact proves that this mass of olivine rock was ejected in a fused condition, and spread out in layers while yet fluid.

Another variety of peridotitic rock, described by Tschermak under the name of picrite, was found by him in Moravia and Austrian Silesia, where it appeared in the Neocomian. In this rock, olivine forms about one-half of the whole mass, with the addition of diallage, hornblende, and mica. These picrites have sometimes the habitus of gabbro. Not only does the study of their behaviour in the field indicate their igneous origin, but the same inference may be drawn also from their microstructure. In the typical specimens collected by Tschermak, the presence of a vitreous base can be detected. As for the palaeopicrites<sup>5</sup> discovered by Sandberger in older formations, it appears from his observations and those of Gümbel that they also are eruptive. Among the experimental proofs which may still further be invoked to prove the igneous origin of peridotitic rocks are Daubrée's celebrated experiments, in which he reproduced lherzolite artificially by the dry fusion of chondritic meteorites, thus proving, in the most conclusive manner, that nature may have adopted the same process in the formation of rocks, having a like mineralogical constitution.

But while the peridotites above mentioned are eruptive, it is none the less true that many masses of olivine rock present characters from which an igneous origin cannot be demonstrated.<sup>6</sup> The grounds for this assertion may best be shown by a brief

ordinary light, to be composed of a mass of homogeneous olivine, but in polarised light was seen to be composed of granules of irregular size, and much larger than those of the olivine of St. Paul. With this exception the other microscopical characters are the same in both rocks: the fissures, more or less regular, marked by black lines, intense chromatic polarisation of the olivine, roughness of its surface, &c. &c. The sections of chromic iron in dunite are larger than those in the specimens from St. Paul, but in other respects they present the same features.

<sup>1</sup> Bonney, On the Serpentine and associated Rocks of the Lizard District, Quart. Jour. Geol. Soc., vol. xxxiii. pp. 884-924.

<sup>2</sup> Bonney, The Lherzolite of the Ariège, Geol. Mag., Decade ii., vol. iv. pp. 59-64.

<sup>3</sup> Zirkel und Preyer, Reise nach Island, p. 292.

<sup>4</sup> Naumann, Lehrbuch der Geognosie, vol. iii. p. 365.

<sup>5</sup> See Oebbke, Ein Beitrag zur Kenntniss des Palaeopikrits, 1877.

<sup>6</sup> Rosenbusch, Massige Gesteine, p. 526. This author has felt the inconvenience of grouping together all the peridotites, and confesses that analogy of composition cannot extend in a general way to analogy of origin; he admits that the igneous origin of many peridotites is not proved, and that he should not, therefore, have included in his manual on the massive rocks some peridotites which appear as regular intercalations among crystalline schists.

resumé of the results arrived at by the observers who have described the peridotites found as regular intercalations in various formations.

The first peridotite ever noticed was discovered by Lelièvre in 1787; it was named lherzolite by De la Métherie,<sup>1</sup> who mistook it for an essentially pyroxenic rock. Damour<sup>2</sup> showed in 1862 that it consisted of two-thirds of olivine. According to the researches of Charpentier<sup>3</sup> and Marrot,<sup>4</sup> that rock occurs in a Lias limestone, which in contact with granite becomes transformed into granular limestone. Other communications on the lherzolite published by Zirkel<sup>5</sup> leave some doubt on the question of origin. Sandberger, on the other hand, does not consider the rock to be eruptive.<sup>6</sup> Des Cloizeaux<sup>7</sup> has noticed some lherzolites intercalated in the Silurian limestone of Eaux-Bonnes (Basses Pyrénées), and at Beyssac (Haute Loire), where they are found in a granitic region. The olivine rock of Seefeld Alp, in Ultenthal,<sup>8</sup> to the south-east of Meran in Tyrol, is intercalated in the crystalline schists. The peridotites discovered by Sandberger<sup>9</sup> at Conradsreuth, near Hof, are, like the rock of Ultenthal, encased in crystalline schists. Tschermak<sup>10</sup> showed afterwards that the peridotites in the region of Karlstätten, Aggsbach, and in the granulitic district of Lower Austria, are also interbedded in crystalline schists. In Norway peridotites have been recognised by Kjerulf, and Pettersen<sup>11</sup> has shown that peridotite rocks are intercalated in strata belonging to the group of the mica schists of Tromsø. Becke<sup>12</sup> in his recent work on the peridotites of Greece does not consider them as eruptive. Gümbel in his geognostic description of the Fichtelgebirge<sup>13</sup> admits that the serpentine rocks imbedded in the gneiss of the Fichtelgebirge are altered peridotites. According to Axel Erdmann<sup>14</sup> the eulysites, so similar to peridotite gneiss, are found in Sweden intercalated in gneiss in the neighbourhood of Tunaberg.<sup>15</sup>

<sup>1</sup> De la Métherie, *Théorie de la Terre*, vol. ii. p. 281.

<sup>2</sup> Bull. de la Soc. Géol. de France, 2<sup>ème</sup> Série, vol. xix., 1862, et Neues Jahrb. f. Min., 1863, p. 95.

<sup>3</sup> Charpentier, *Essai sur la Constitution géognostique des Pyrénées*, 1823, p. 245.

<sup>4</sup> Ann. des min., 2<sup>ème</sup> Série, vol. iv., 1828, p. 207.

<sup>5</sup> Zirkel, *Zeitschrift d. d. geol. Ges.*, 1867, p. 136.

<sup>6</sup> Bonney's Memoir already quoted tends, on the contrary, to prove the eruptivity of the lherzolite.

<sup>7</sup> Des Cloizeaux, Bull. de la Soc. Géol. de France, vol. xix. p. 48.

<sup>8</sup> The specimens of the Ultenthal rock I have seen in the collections show great analogies to the rock of St. Paul, the only difference they offer in aspect consisting in the larger size of the grains.

<sup>9</sup> Sandberger, Neues Jahrb. f. Min., 1866, p. 391.

<sup>10</sup> Tschermak, *Sitzungsb. der. K. K. Akademie der Wien. Wiss.*, vol. lvi., 1867.

<sup>11</sup> Pettersen, Neues Jahrb. f. Min., 1876, p. 613.

<sup>12</sup> Becke, Tschermak, *Mineralogische Mittheilungen*, loc. cit.

<sup>13</sup> Gümbel, *Geognostische Beschreibung des Fichtelgebirges*, Gotha, 1879, p. 148.

<sup>14</sup> Neues Jahrb. f. Min., 1849, p. 837, and Zirkel, *Lehrbuch der Petrographie*, vol. ii. p. 335.

<sup>15</sup> It is important also to notice a communication in which Brögger (Neues Jahrb. für Miner, 1880, pp. 187-192) clearly demonstrates the existence of schistoidal peridotite rocks in the Søndmøre region. (See also H. H. Reusch, *Das Grundgebirge im Südlichen Søndmøre und in einem Theile von Wordfjord, Kristiania*, 1877.) In the same number of the Neues Jahrb. für Min., E. Cohen gives an account of a paper by Tørnebohn (*Mikroskopiska bergarter studies*, Geol. Fören. i. Stockholm, Förhandl., 1877, Bd. iii. No. 9), in which the latter describes the peridotite of Ketillsfjäll. According to his description it must be very similar to the peridotite of St. Paul; it is regularly intercalated in the

During the last few years numerous discoveries of serpentine have been made, many of which are incontestably derived from peridotites, and show how frequently these rocks must have existed in crystalline schists. The serpentines do not always afford materials for deciding the question as to the origin of the rocks from which they have been derived, but in most cases authors agree in considering these primitive rocks as interbedded, and not as injected veins.<sup>1</sup>

Although doubts may exist as to the true structure or mode of occurrence of some of these rocks, it is nevertheless certain that very often true peridotites do not occur in the form of injected veins. Besides, the fact, now recognised, that rocks formerly reputed eruptive are regular intercalations in the crystalline schists, is being continually confirmed by fresh examples. It is unnecessary here to discuss the vexed problem of the manner in which the schists and their associated peridotites may have been formed, though we do not hesitate to admit that the mode of formation must have been very different from that of eruptive rocks.

From the data which have been collected in the foregoing pages, it is evident that one may admit for the peridotitic rocks two modes of origin, but that the question of origin is on the whole to be gathered rather from the behaviour of the rocks in relation to those among which they lie than from mineralogical composition. Unfortunately, however, this very important element of the relation of a rock towards those that encircle it is wanting in the case of St. Paul's Rocks. The island stands alone in mid-ocean, and of its connection with other rock-masses we cannot state anything definite.

If we compare the two hypotheses with respect to the mode of formation of these islets, which are the reasons that plead in favour of the eruption theory? First, the law of analogy. We know, indeed, that the small oceanic islands are either of coralline or volcanic formation. The observations of Darwin, who was the first to draw attention to this law, have been amply confirmed by geologists who have made these questions their special study. Why should not the Rocks of St. Paul be referred to the same rule? May not the peridotite of St. Paul be assimilated to the group of crystalline rocks represented by the syenites, diabases, and melaphyres, forming the basis of several volcanic islands in the Atlantic?<sup>2</sup> We know for a certainty that these plutonic masses, though not quite presenting the appearance of submerged continental

quartzites and mica schists, which form the bases of that region, and is covered conformably by a granular mica schist. Cohen remarks that this stratigraphic disposition does not exclude the possibility of the rock being an inclined vein (Lagergang); but he adds that the number of peridotites showing an eruptive origin becomes so restricted that one may ask whether there does really exist olivine rocks which possess the characters of eruptive masses. After this remark, the editor of the review places a note which is a doubtful vindication of the eruptive origin of the lherzolites, "Für die Lherzolithe dürfte der eruptive Character doch wohl nicht zweifelhaft sein!"

<sup>1</sup> A. Geikie has found a series of beautiful schistose crumpled serpentines intercalated among limestones and schists in the North of Scotland.

<sup>2</sup> Hartung, *Geologische Beschreibung der Inseln Madeira und Porto Santo*, p. 175.

regions, form massive ridges on which the volcanic products of the islands of these seas have spread themselves.<sup>1</sup>

An obvious as well as cogent argument in favour of an eruptive origin is afforded by the fact that the bottom of the Atlantic has been for long ages, on many points, the theatre of volcanic manifestations; and, in particular, the region in which the rocks of St. Paul are situated, has, in comparatively recent times, shown signs of eruptive phenomena. For more than a century, indeed, appearances have been observed in this very region that prove it to be the centre of volcanic activity. Scrope<sup>2</sup> says that Daussy,<sup>3</sup> and after him Darwin,<sup>4</sup> have brought together a number of traditions that indicate the existence of a vast volcanic region beneath the Atlantic, midway between Cape Palmas, on the West Coast of Africa, at lat. 4° N., long. 10° W., and Cape St. Roque in South America, lat. 50° S., long. 37° 37' W., in the narrowest of the ocean belts, at the central point of which the island of St. Paul is situated.

The isolation of these rocks might be adduced as a further proof of their eruptive origin. The soundings made between St. Paul and the nearest continent and other islands, tend to show that the rocks possesses a purely local character in perfect harmony with the theory of volcanic formation.<sup>5</sup>

Having thus exposed the reasons which appear to militate in favour of the first hypothesis (the volcanic origin), let us now consider what may be advanced to support the idea that this peridotite might belong to the schisto-crystalline series. Since the arguments in favour of the eruptive origin are not absolutely conclusive, it naturally follows that the second alternative may be maintained. Indeed, we have seen that most peridotites belong to the schisto-crystalline series, and we cannot separate their mode of formation from that of the rocks with which they are associated. In the peridotite of St. Paul the banded structure, the position assumed by the crystals in the mass, their form, in short, all the peculiarities above mentioned, are characteristically those of the schists. If this, after all, be the true position of the rock, as we are rather inclined to believe, how are we to account for the presence of such a peridotitic mass isolated in mid-Atlantic?

<sup>1</sup> Cohen (Ueber die sogenannten Hyperstenite von Palma; Neues Jahrbuch, 1876, p. 747) describes some of the rocks of the island of Palma as either covered with, or cut through by, more recent lavas. He considers them as pre-tertiary. He did not find any hyperstenite, and he classes them as diabases, olivine-diabases, diorites, and syenites, &c. Van Werveke has recently described a limburgite from the same island (Neues Jahrb., 1879, p. 482). Finally, S. Calderon, in a paper read before the Geol. Soc. of London in June 1879, distinguishes two types of rocks at Palma; the one, more ancient, characterised by the presence of hornblende, the other, more recent, by that of augite.

<sup>2</sup> Scrope, Volcanoes, p. 237.

<sup>3</sup> Daussy, Note sur l'existence probable d'un volcan sous-marin situé par 0° 20' lat. S. et 22° long. O., Comptes rendus, 1838, Avril, p. 512.

<sup>4</sup> Darwin, Geological Observations on Volcanic Islands, 1844, p. 92.

<sup>5</sup> The Challenger soundings and temperature observations show a low ridge running the whole length of the Atlantic, with about 2000 fathoms over it. It is called "Dolphin" ridge in the North Atlantic; "Connecting Ridge" at the Equator; "Challenger" ridge in the South Atlantic; and on it are situated Tristan d'Acunha, Ascension, St. Paul's Rocks, and Azores.—J. M.

On the supposition that the rock belongs to the schists, we must necessarily suppose the existence of an upheaval of the earth's crust. The beds, of more or less considerable thickness, which formed the entire mass in which the peridotite was encased, obeying a heaving motion (the effects of which are so conspicuous in analogous rocks), must have risen above the water, and then, being attacked by the erosive action of the waves, the outer portions which covered the peridotite were disintegrated and removed, leaving behind them as a fragment of the primitive mass nothing but what we now see of the Rocks of St. Paul.

It is important not to lose sight of a fact already referred to concerning the resistance offered to erosive actions by a rock so massive and compact as this peridotite. Though peridotites have often undergone transformation into serpentine, it does not follow that they are so easily alterable as is often stated, or that the resistance they offer to mechanical force is not stronger than that which they oppose to hydro-chemical action. It may well be supposed that, at the point now occupied by these rocks, there formerly rose a mass of ancient rocks, the original dimensions of which may have been successively reduced by mechanical and chemical phenomena. Such an interpretation of the history of the locality is neither contrary to the nature of the rock, nor to the details, still very incomplete, which we have on its geological structure and relation, for among the schisto-crystalline formations on the surface of the continents many an example might be cited of a similar series of geological changes.

It is scarcely necessary to add that the opinion which tends to see in the Rocks of St. Paul an outcrop of the ancient strata is not antagonistic to that which assigns to the oceanic basins a constancy in the general disposition, maintained during long geological ages. As regards the possibility of the existence of a continental mass in the Atlantic at periods not very remote from our own, with which the island of St. Paul might be supposed to have been connected, it must be confessed that soundings have shown no traces of it, and that the island of St. Paul affords no proof of subsidence. There are no sedimentary formations, either fresh-water or marine, to point to a greater extent of land-surface in former geological ages, such as is noticed in some other Atlantic islands.

The absence of fauna and flora on these rocks relieves our problem of the biological difficulties which other less barren oceanic islands present.

It is well known that Lyell,<sup>1</sup> in opposing the opinion held by many naturalists, and in particular by Edward Forbes, that the Azores, Madeiras, and Canaries are the last remaining fragments of a once continuous area of land that connected them with the West of Europe and North Africa, laid great stress on the enormous depressions existing between these regions, because such a theory "involves an amount of change of level so vast, that to assume its occurrence since the close of the Miocene epoch, is quite inconsistent with

<sup>1</sup> Lyell, *Principles of Geology*, vol. ii. p. 410.

what we know of the constancy of the position of continents and oceanic basins throughout long geological periods."

This argument cannot, I admit, be applied in all its rigour to the island of St. Paul, because the period of its eruption, or of the upheaval which raised it above the level of the Atlantic is unknown. Yet there exist between St. Paul and the nearest land-masses depressions as great as those mentioned by Lyell; and the soundings, particularly those made by the Challenger Staff, have nowhere discovered in the vicinity of the island anything that can be looked upon as even a trace of submergence.<sup>1</sup>

<sup>1</sup> The soundings of the Challenger in this region, together with the results of the bottom temperatures, show that St. Paul's Rocks are situated on a ridge connecting the "Dolphin" and "Challenger" ridges, and called "Connecting Ridge." The depth on this ridge appears to be less than 2000 fathoms, and it runs in a W.N.W. and E.S.E. direction from the rocks. A cove between the two largest islets has depths varying from 5 to 10 fathoms. At the S.W. point there is a sunken rock which appeared to have 3 fathoms over it. When secured to one of the north knobs the Challenger had 104 fathoms under her bow, 60 yards from the shore. The N.W. and S.E. sides are steeper than the S.W. 500 fathoms are found at 1800 yards from the shore in the two former directions; whereas the 500 fathom line is at a distance of about 2 miles to the S.W. In approaching St. Paul's from the east at a position lat. 3° 8' N., long. 14° 49' W., the bottom shows a level plateau, extending for 500 miles, the depth being from 2300 to 2500 fathoms. After this there is a gradual ascent to a depth of 1500 fathoms, 150 miles east of St. Paul's, then a depression to 1900 fathoms at a distance of 60 miles from the rocks. To the west and northward of the rocks, at a distance of about 3 miles, there is a depth of 1425 fathoms. The soundings between St. Paul's and Fernando Noronha show a deep ditch of 2475 fathoms to exist between these islands.—J. M.

## EXPLANATION OF THE PLATE.

- Fig. 1. *Peridotite of St. Paul's Rocks.* General aspect of the microstructure of the rock. This section is almost entirely composed of colourless grains of olivine more or less elongated of about 0.01 mm. in diameter, the yellowish-brown or black particles scattered through the section are chromic iron (p. 9) ( $\frac{1}{200}$ ).
- Fig. 2. *Peridotite of St. Paul's Rocks.* This figure represents a section of a specimen with banded structure. The darker stripes consist of a compact aggregation of minute olivine grains and chromic iron particles. The large striated and broken crystal at the upper part of the figure is the section of enstatite, described pp. 14, 15 ( $\frac{1}{60}$ ).
- Fig. 3. *Peridotite of St. Paul's Rocks.* The ground mass composed of olivine grains, the yellowish-brown sections are chromic iron (p. 9), the green ones actinolite, described pp. 11 and 12 ( $\frac{1}{120}$ ).
- Fig. 4. *Phosphatic vein in the peridotite of St. Paul's Rocks.* Section of a concretion of phosphate of calcium, described pp. 17, 18. The yellowish-brown undulating lines are oxide of manganese ( $\frac{1}{40}$ ).





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